California State Journal of Medicine

ISSUED MONTHLY: OWNED AND PUBLISHED BY THE

MEDICAL SOCIETY OF THE STATE OF CALIFORNIA

Vol. XIV, No. 3 MARCH, 1916 $1.00 a Year

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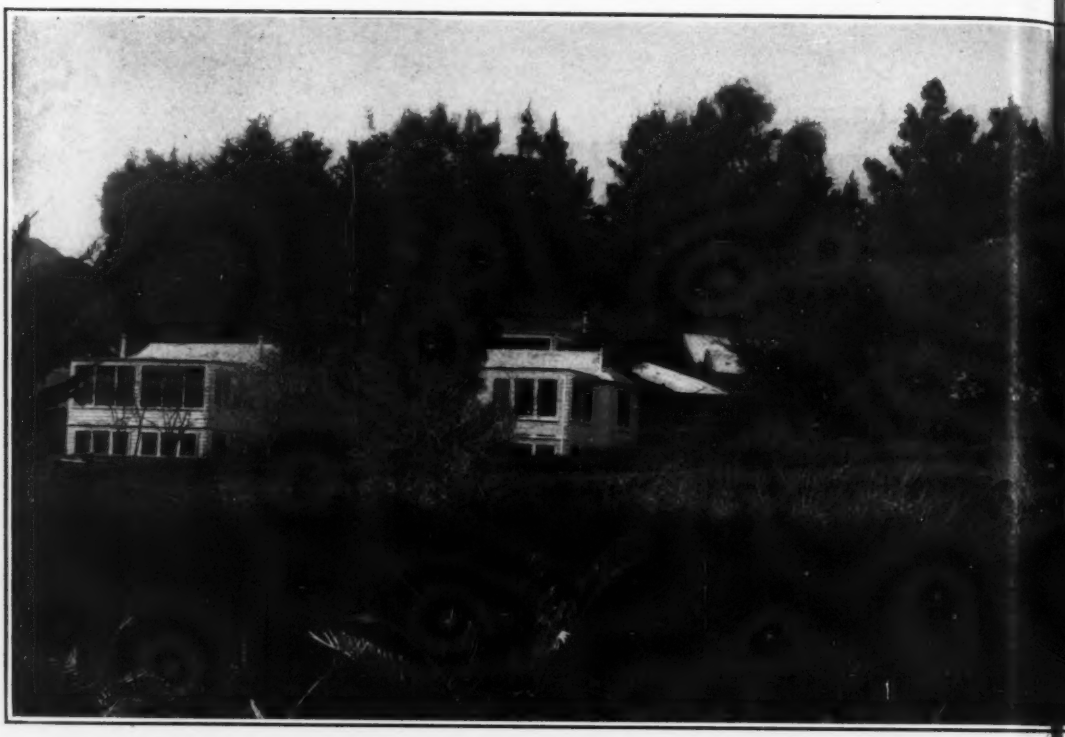

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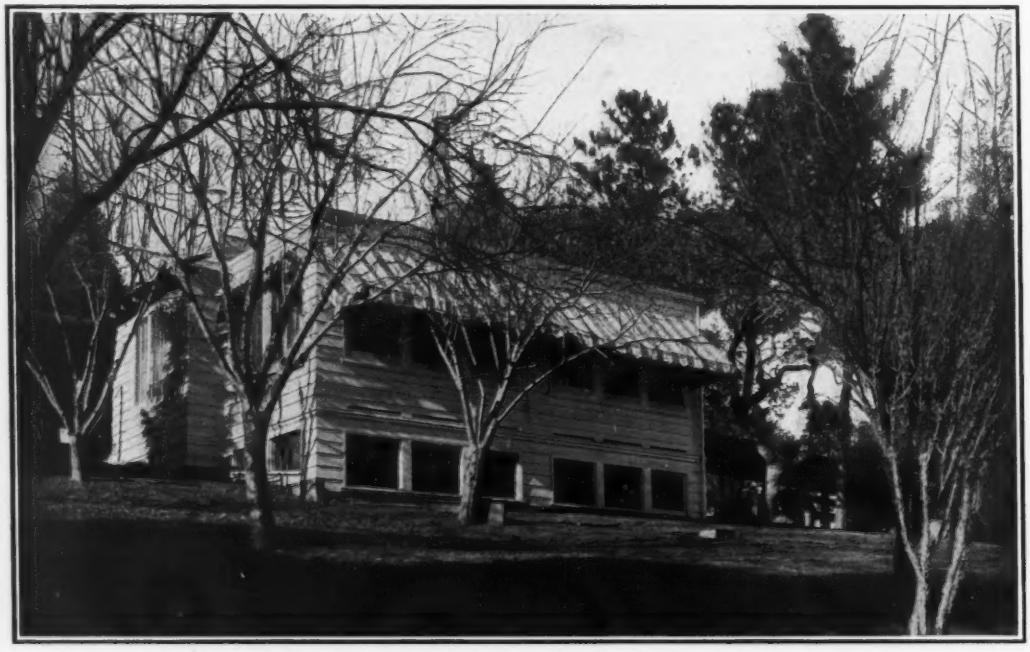

ONE OF THE COTTAGES (IN WINTER).

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Owned and Published Monthly by the

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Notify the office promptly of any change of address, in order that mailing list and addresses in the Register may be corrected.

VOL. XIV MARCH, 1916 No. 3

EDITORIAL NOTES

STATE SOCIETY MEETING, APRIL 1916. FRESNO!! FRESNO!! FRESNO!!

April 18, 19, 20; remember the dates; Tuesday, Wednesday and Thursday.

See elsewhere in this number of the JOURNAL for the preliminary program of the scientific sessions.

There will be an interesting discussion of the insurance situation from a number of angles and probably the discussion will be profitable to all.

Write at once to the Secretary of the Committee of Arrangements, Dr. Stanniford, Fresno, for your hotel accommodations—and state just when you will arrive.

Entertainment for all, and of a most enjoyable kind, is being arranged and there is every reason to believe that this will be one of the best and most pleasant meetings the Society has had for a number of years.

Do not fail to attend this meeting. Note the dates right now—April 18, 19, 20. Fresno. Must go. Headquarters hotel is the Hotel Fresno and all the sessions will be held in that hotel.

The roads will be in fine shape and those who like motoring—and who does not?—will enjoy their trip—as well as their visit to this one of our most progressive of the many valley towns.

Fresno, April 18, 19, 20, 1916.

YOUR OFFICE.

Some questions that were casually asked a short time ago have suggested a note from time to time on little things connected with the office of the State Society and its methods of doing business. There are three large steel safes in the office; not burglar-proof but reasonably fireproof; that is, any ordinary fire in the rooms or the building would not attack them seriously. Two of them are quite full and the other is about half full—of records. All the reports of county society membership since the fire are bound and put away in these safes. All correspondence relating to suits for damages for alleged malpractice, or threats, or rumors of threats, are also bound and filed away. All documents in every such case when it is finally terminated, are kept and filed; these files are not yet complete, as many documents are still in the offices of our attorneys; but they will all be duly filed in time. What for? So that we may at any time have at hand all the information possible about any physician who has been or is a member. And also, we are as anxious to file information about those who are not members, but who may some day want to become such. The paper for the JOURNAL is not bought from month to month from some paper house. It is made, once or twice a year, at a mill in Maine. It is made of a special size, weight and quality best adapted to our needs of clear printing and of taking illustrations reasonably well. Having it made exactly to suit our requirements secured a saving of 18% in waste alone and gave us a better paper. Incidentally, by getting our paper in this way and in good quantities, we get a better price on it; and that helps too!

TUBERCULOSIS.

A very successful joint conference of the California Association for the Study and Prevention of Tuberculosis and the San Francisco Association for the Study and Prevention of Tuberculosis was held in San Francisco on Thursday, January 27th. The session was opened in the morning by an address by the President of the State Medical Society, Dr. Harry M. Sherman. During the morning, papers relating to incipient and advanced cases, clinics, visiting nurses, etc., were discussed; at 12:30, following a luncheon, the broader aspects of the general campaign against tuberculosis were discussed by four speakers, and the sessions continued during the afternoon and evening.

YOUTHFUL PARENT; ORDINARY CHILD.

A gentleman named Redfield, of Chicago, is interested in the subject of eugenics and has compiled some rather out-of-the-way statistics. Of course, "nothing lies like statistics," but at the same time they are interesting. According to his report of researches into the male parent's age of 571 eminent men (direction of eminence not stated) more than half of them were children whose male parent was from 45 to 60 at the time of the birth of the eminent-man-to-be.

POISONOUS FLY PAPERS.

Little things are sometimes of significance, when one comes to study them carefully. No one paid much attention to Fourth of July catastrophes until the *Journal A. M. A.* began to study the matter; and now it is different. Recently some one has begun to study the accidental casualties due to poisonous fly papers, and the *Journal of the Michigan State Medical Society* has the following item on the subject:

> A year ago, in discussing this subject editorially, we gave a partial report of the cases of arsenical poisoning of children from accidentally consuming the contents of fly-destroying contrivances during the summer of 1914. It was gratifying to note the number of medical journals that reprinted our editorial or commented upon the subject. The discussion was evidently a timely one.
>
> For the summer of 1915 we have been able to secure the reports of the following cases:

Month	No.	Fatal	Recovery Indicated	Recovery Doubtful
May	1	1		
June	2			2
July	5	2	2	1
August	14	5	8	1
Totals	22	8	10	4

These cases were reported by the daily press as occurring in the following states: Georgia, 1; Illinois, 6; Indiana, 2; Iowa, 2; Massachusetts, 2; Michigan, 2; Missouri, 1; Nebraska, 1; New York, 1; Oklahoma, 1; Ohio, 1; Pennsylvania, 2; a total of twenty-two cases. This report must necessarily be considered as very incomplete and but an indication of the possible extent of a wholly preventable danger.

We again point out the fact that the symtoms of arsenical poisoning are very similar to those of cholera infantum and that undoubtedly a number of the cases of cholera infantum that occurred were really cases of arsenical poisoning, and death, if occurring, was attributed to the fact. The cases reported were of children ranging in age from 1 to 6 years. These little patients are not old enough to tell what they have taken when questioned as to their illness, and unless they are seen consuming the fly poison the actual cause of their sickness or death is overlooked and the fatality ascribed to cholera infantum or to some other similar causes and the error in diagnosis goes undetected.

We repeat, arsenical fly-destroying devices are dangerous and should be abolished. Health officials should become aroused to prevent further loss of life from their source.

Our Michigan Legislature, this last session, passed a law regulating the sale of poisonous fly papers. Similar enactments should be secured and enforced in every state in the Union.

OBSTETRICS AND MALPRACTICE SUITS.

Of course it is not always possible to have a woman who is about to be confined placed in a properly equipped hospital where everything that may be needed is at hand—and *clean;* nor yet is it always possible to have the services of a thoroughly trained nurse at the time of the confinement. In a very large number of confinement cases the means of the patient will not permit luxuries of this sort, and therefore in many cases a "practical nurse" is all that the patient can provide for the assistance of the doctor. Very frequently the practical nurse is some old woman who has helped at confinements and therefore is thoroughly convinced of the fact that she knows it all. During the past year we have had four suits for damages for alleged malpractice in confinement cases, the basis of the allegation of negligence, on the part of the doctor, coming in every instance from uncalled-for comment on the case by the practical nurse or old woman in attendance. To be sure, we have won all of these suits, but even winning suits is an expensive proposition and annoying to the doctor who is sued.

In every confinement case where you are confronted with a situation of this kind—that is, a "practical nurse" or some old woman to assist—make it a point to be unusually careful and to preserve in your records ample notes of exactly what happened. Above all else, make sure that the placenta is carefully examined and in the presence of at least one other person. Do not think that all suits for damages for alleged negligence by the physician arise from cases of fractures; there is no range of human ailment which has not provided material for such a suit and obstetrics has furnished its full share.

OPERATIONS AND THE LAW.

It may not be amiss to emphasize, even though they have been touched upon before, some few of the points wherein it is essential that the surgeon know what the law requires of him. And first of all, remember that the law does not require anyone to treat or to operate upon a sick or injured person; the treating or operating is the creation of a voluntary contract entered into by the physician or surgeon. It then becomes his legal duty to live up to the letter of his contract and the law will inquire strictly into the matter of neglect. All operations fall naturally into three classes: Emergency; by consent, where there is no emergency; and trespass, where something is done without consent, there existing no emergency. In the first class there is great latitude and if what is done is done in good faith and to the best of one's knowledge and ability, that is sufficient. It has even been held that one not a physician or surgeon, in the face of an emergency when it is probable that a life will be lost if some immediate operation is not done, may so operate and if he does the best that he can, he is not held in manslaughter if the party dies. Where the patient is unconscious and there are no relatives at hand or none can be reached without a dangerous delay, it is quite proper to do anything that will

have a tendency to preserve life, even without consent. But in all such cases it is the wise thing to have a consultation, if it be possible, and to keep careful records of the diagnosis, opinions before operation, and what was done and found. In all such operations without consent, the operator should use extraordinary care and should not depart in any way from what is recognized as the proper and general procedure; the law does not regard operative experiments without consent, with much favor. No operation not of emergency should ever be done without a full understanding between the physician and the patient, or the parents if the patient be a minor, and it is wise to have this understanding extend to and include other relatives of the patient, if such there be. If possible, without forcing the issue, it is well to have this consent in writing. Nowadays, few if any surgeons undertake a major operation with any restrictions implied; that is, they have the consent of the patient to do whatever may seem to be necessary after the operation has been begun; this is the only safe course. There should never be the slightest chance of misunderstanding as to this general consent to do what is necessary; if it is less than this, if the consent is qualified and when the operation is in progress some condition is found needing attention that was not specified, the operation should stop and the patient be allowed to become conscious before anything further is done. Failure to follow this course has resulted in heavy judgments against surgeons. When the right ear was to have been operated upon, and under the anesthetic the left ear was found to be in worse case and was the ear of operative attack, it was held a trespass on the person of the patient and a heavy verdict given. So, where in an operation to remove a foreign body from the foot, a sesamoid bone was removed without previous consent, it was held a trespass and a judgment given to the plaintiff. It is needless to say that an abortion should never be performed except after consultation and in the presence and with the assistance of another physician.

REPORTS ARE TO BE MADE, NOT ASSUMED.

When the law requires that a physician shall report certain things, it means that he shall actually make such a report and not suppose that it will be assumed from some other fact. Most people are not mind-readers, and those who are, are busy. A report is a report and must be made in writing to the proper person; ignorance of the law is no excuse. If a man chooses to practice medicine it is understood that he will familiarize himself with the duties which the law has placed upon him. In this connection comes a timely "news letter" from the State Board of Health:

> A physician of Contra Costa County who was summoned to appear before the California State Board of Health at its last meeting to explain his failure to report a case of typhoid fever in a dairyman, stated in his defense that he had sent a specimen of blood to the State Hygienic Laboratory for examination, and that he considered this equivalent to reporting. He was warned by the Board that formal notification to the health officer of cases of communicable disease is necessary, in order that the provisions of the law may be complied with. The Board is considering other cases of failure to report communicable diseases, and is determined to secure such reports from all physicians in the State.
>
> Birth certificates will not be accepted for filing after one year from date of birth, according to a decision of the State Board of Health. In some cases, attempts have been made to file certificates several years after date of birth. The law does not authorize the filing of birth certificates after a reasonable length of time has expired, and the Board has set the period of one year as reasonable.
>
> In reply to many inquiries concerning the matter of compelling dangerous syphilitic patients to take treatment, the Board has replied that it has no power under the law to compel treatment of any kind, but it may isolate persons who are dangerous to the public health.

HOSPITAL LIABILITIES.

The liability of a hospital for the negligent or careless acts of its employees or staff depends upon the character of the hospital. All state institutions, hospitals, asylums, and the like, are expressly without liability for torts due to the negligence or lack of skill or judgment of their employees; and the rule holds as to county or city and county institutions, strictly such. Nor is there liability in such institutions for insufficient or poor food. Private hospitals are of two sorts; charitable institutions and those for gain; railroad hospitals, though not for gain, are held not to be charitable institutions. The courts in the various states are not absolutely agreed as to the non-liability of charity hospitals, but the great weight of opinion is that they are not to be held in damages for the negligence of their employees or staff; in this state that is the rule. The argument is that such hospitals are supported by funds given for charity and that such gifts may not be diverted from that purpose to the payment of damages to individuals who may suffer from negligence, etc. With hospitals for gain or profit, however, the rule is quite otherwise; they are liable for the torts or wrongs of their employees due to negligence, carelessness, lack of skill and the like. The trend of all recent decisions is that such hospitals, even though they may have exercised due care in the hiring of servants, are responsible for the negligent acts of such servants. Thus a hospital was held in damages for the death of a typhoid patient who jumped from the open window in the absence of the nurse from the room for a brief space; another was held for the burning of the patient by a hot water bag placed in the bed by the nurse; and another for mistakenly giving the patient a solution of bichloride of mercury. But it must be well proved that the act complained of was the act or failure to perform the act that caused the wrong. Such is the general status of hospitals in their legal relation to the public, and it seems reasonable.

SOUTHERN PACIFIC.

The Southern Pacific Company has established a news bureau that sends out leaflets on interesting subjects. It is a good move. Too long have the large corporations gone their own way and let the public come to them when it had to and find out what it could. Also, many of these items are of beneficial use. As, for instance, their report of the number of accidents due to automobiles carelessly driven across tracks as indicated by the breaking of the protective gates which, being down in order to be broken, are conclusive evidence of careless driving. The following item in regard to the increase in the number of elk in this state will be news to most of us:

> So abundant are elk becoming in several parts of California that it will be proper to allow some hunting within the next few years, according to Director Barton W. Evermann of the California Academy of Sciences, which is aiding in the distribution of the animals from the Miller & Lux ranch at Buttonwillow, Cal. Reports received show that all of the shipments during 1914 were successful and that the herds show every indication of a rapid increase in numbers. The Southern Pacific recently handled the following elk shipments:
>
> 4 elk (1 male and 3 females) to Mooney Park, Visalia.
> 1 female to City Park, Fresno.
> 1 male and 2 females to the private ranch of A. V. Lisenby, Fresno.
> 1 male to the private park of John Zapp, Fresno.
> 2 males and 2 females to Alum Rock Park, San Jose.
> 1 male and 3 females to A. T. Hain, Cook, Cal., for the Vancouver Pinnacles Reservation.
> 1 male and 4 females to J. F. Dunne for liberation on his private ranch.
> 1 male and 5 females to the City Park, Santa Cruz.
> 4 females to Boulder Creek for the Big Basin reservation.
> 3 males and 9 females to the City of Sacramento for Del Paso Park.
> 2 males and 10 females to Petaluma for its public park.
> 2 males and 10 females to Willits, Mendocino County, for the ranch in Eden Valley in which Henry D. Nichols and Wm. G. Henshaw are interested.
> 3 males and 19 females to San Diego for Balboa Park.

TWENTY-SEVENTH EDITION

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ORIGINAL ARTICLES

CLINICAL RECORDS.

V. The General Oversight and Filing of Records.*

By GENEVIEVE L. CLARK, San Francisco.

The purpose of this concluding article on the clinical records of the University of California Hospital is mainly to describe the work of the Record Filing Room. The system which is essentially that in use in the Massachusetts General Hospital was originated by Mrs. Grace W. Myers,[1] to whose careful training the writer is greatly indebted. To meet the requirements of the University Hospital, however, a number of changes have been instituted, and it has seemed advisable, therefore, to outline briefly the complete system here used.

ADMISSION OF A PATIENT.

The blank admission slips (Fig. 1) are kept in the office in book-form, numbered consecutively; each number having two corresponding slips, one a carbon copy of the other. When a patient is admitted to the hospital, the admission slips and the graphic chart sheet are made out by the admitting clerk, who is solely responsible for the correctness of the data. Patients admitted when she is not on duty are later interviewed by her to insure correctness in data. The original admission slip remains in the book; the carbon copy is detached and sent with the graphic chart sheet to the ward with the patient. Thus, at entrance, the patient receives his hospital number by which he is referred to as long as he remains in the hospital, no change of number being made in case of transfer from one service to another. During the patient's stay the admission slip and graphic chart, together with the history and all accessory sheets, are kept in an aluminum folder in its pigeon-hole on the nurse's desk. These are not removed from the ward during the patient's stay except in case of transfer. The nurse is entirely responsible for the chart; the intern for the history, laboratory reports, etc.

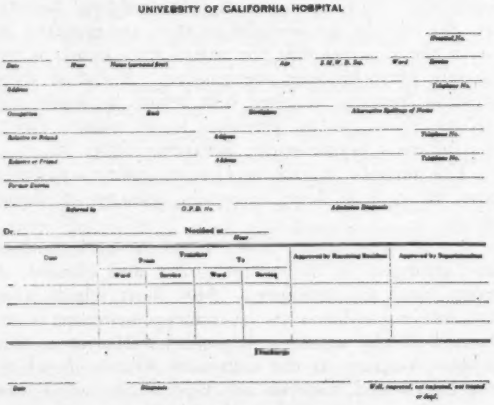

Fig. 1—Admission Slip, 16 x 19 cm.

TRANSFER OF A PATIENT.

When a patient is transferred from one service to another, for example from Medicine to Surgery, the medical intern fills out the proper places on the admission slip (Fig. 1), obtaining the signatures of the surgical resident and of the superintendent on duty. The admitting clerk then makes out a new title sheet which she sends with the admission slip to the surgical ward; and at the same time sends a notice of transfer (Fig. 2) to the record room. Only the admission slip is transferred with the patient; a new graphic chart, history, treatment record and laboratory sheet being started.

TRANSFER SLIP

Date

Name Hosp. Number

has been transferred to-day from

Ward Service

to

Ward Service

1m 12,'14

Fig. 2—Transfer Slip, 6½ x 10 cm.

The medical history is then removed from the ward folder, the chart is marked "Transferred" (exact time indicated) by the nurse, and the history is completed by the intern. The surgical intern may borrow the completed medical history until the following Tuesday noon when the medical intern takes it to the record room with the other discharges of that week. Then, if the surgical intern wishes to use the history further, he can get it from the custodian of records, after signing a receipt for it, and keep it on the surgical ward with the surgical history until the patient leaves the hospital.

DISCHARGE OF A PATIENT.

When a patient is discharged from the hospital the admission slip (Fig. 1) and treatment record, having been signed by the intern, are taken to the office by the nurse. The admission slip remains in the office but the treatment record is taken back to the ward as soon as it has been signed by the clerk on duty. No patient is allowed to leave the ward until the admission slip is signed by the intern, nor can he leave the hospital until the slip has been turned in at the office. In cases of death the admission slip is brought to the office immediately.

The history is then removed from the ward folder, the chart is marked "Discharged" (exact time indicated) by the nurse, and the history is completed by the intern. Before the history is ready to be turned in at the record room, it must be submitted to the visiting surgeon or physician

* Fifth and concluding article describing the clinical record system in the University of California Hospital. An article by Dr. J. L. Whitney and one by Dr. E. S. Kilgore on related subjects appeared in the Boston Medical and Surgical Journal of November 18, 1915. Reprints of the series together with record forms, etc., will be sent on request.

who had charge of the case for his correction, diagnosis and signature. On Tuesday noon the completed histories of all patients either discharged from the hospital or transferred from one service to another during the previous week are handed in at the record room.

DAILY WORK OF THE RECORD ROOM.

The daily work consists of keeping up the admission and discharge books, and the service lists. The admission book contains the data of the admission slip (Fig. 1) and runs across two pages of a book, each line of which is numbered consecutively according to hospital numbers and represents the number of patients admitted to the hospital since the beginning of the institution. The discharge book contains the date of discharge, name, service and hospital number and runs across only one page of a book the lines of which are numbered consecutively and represent the number of discharges and the order in which they have occurred since the book was started. Thus, a daily record is kept of all patients admitted and discharged. The service lists (Fig. 3) are primarily

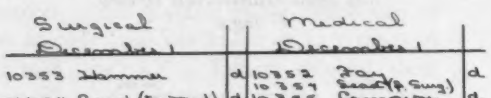

Fig. 3—Service List.

used for the binding and represent all the patients admitted consecutively to each service either by admission to the hospital or by transfer from another service. They are compiled from the admission book and the transfer slips. By means of these lists it is possible to find any error in the admission book and to discover when a transfer slip has not been sent in from the office. They are temporary lists made on plain lined paper with the proper spaces ruled (Fig. 3) and are destroyed as soon as the records have been bound.

Each day the book of original admission slips is sent to the record room from the office, and from this are the admissions of the previous day added to the admission book and service lists.

Every morning the admission slips of all patients discharged the previous day are sent to the record room. From these slips are the date of discharge, diagnosis and condition added to the admission book and from these slips also is the discharge book filled out. Then after each name has been verified on the service lists by number, name and service, a "d" is placed after it and the admission slips are filed away according to service.

Whenever a transfer occurs from one service to another, for example from Medicine to Surgery, the transfer slip (Fig. 2) is sent immediately to the record room. After the patient's name on the Medical list a "d" is written in red ink (to show that the patient has been discharged from that service) and also "(to Surg.)" is added. Then the name is entered in its proper place on the surgical list in red ink and "(from Med.)" is also added. In this way the lists of admissions to each service either by entrance to hospital or by transfer from another service are completed. The transfer slips are then filed away with the discharge slips according to service.

The pathological and bacteriological reports are sent to the record room as soon as they are completed. These are filed away according to service and number and kept until the histories are turned in, when they are filed with the proper records. The x-ray reports are copied into the body of the record by the x-ray assistant under the date taken. Important plates are also photographed and 5 x 8 cm. copies pasted in the records.

WEEKLY WORK OF THE RECORD ROOM.

It is the duty of the custodian to see that the records of all the patients discharged from the hospital or transferred to another service during the previous week are handed in at the record room; that they are complete and correct as to dates, numbers, etc.; that each case is catalogued according to both name and diagnosis; and that they are filed away according to service and hospital number. An exact routine for this work is strictly followed.

Tuesday noon each service hands in its records. The admission and transfer slips of these patients are filed according to service and number and for each slip there must be a corresponding history. As the records are brought in they are matched up with the slips, so that the intern may know immediately what histories are missing. A list of these missing histories is given him before he leaves the record room, to be attended to at once. Every record must be in before Saturday night.

The records of each service are taken separately and to each is done a certain amount of detail work.

1. *Arrangement.* The sheets of each history are arranged in the proper order and cleaned of every mark of untidiness. Any chart which is in too bad a condition to be made presentable is returned to the ward to be copied. However, this seldom happens, as the aluminum folders in which the charts and histories are kept in the wards are a great protection. Cases in which the patient remains in the hospital for several months necessarily require more than one graphic chart. The charts are made to be pasted into one continuous chart, which is done when the histories are prepared for binding. At this time the pathological and bacteriological reports are either pasted or copied in as the case may be. If the reports are already copied in they are compared before the originals are destroyed.

2. *Verification.* Next are the histories inspected. The data of the chart sheet is compared with the data of the admission slip and corrected accordingly. The dates of admission and discharge on the chart and history are made to agree with the admission slip. Then the history is inspected to see that all dates are carried forward from one page to another, that the daily notes are dated consecutively, that the final notes have been added,

and that the history is complete. In case of omissions or mistakes that cannot be rectified in the record room the intern is notified immediately.

Then if the case is a transfer, references are plainly indicated on the chart sheet so that the records of both services can be found easily.

If the admission slip indicates that a case is a reentry (that is if "Yes" has been written above "Former Entries"—see Fig. 1) the former histories are looked up and the references put on the chart sheet in their proper places. The admission slips having now fulfilled their purpose are destroyed.

Thursday afternoon a member of the staff looks through the histories in order to see that all diagnoses are complete and made out in accordance with the standard classification. Small omissions are supplied, but any record which is seriously deficient is returned for correction. At this time also the clinical diagnosis may be amplified by data from other special sources, such as the autopsy, bacteriological and pathological reports. Inasmuch as the system is rather elaborate and involves considerable use of cross-references there are many matters which have to be considered in some detail with reference to proper cataloging, especially such as involve etiology and the interrelationship of various conditions present.

3. *Name Cards.* The records are now cataloged according to name. The name cards contain the name, age, service, number and year and are filed in strictly alphabetical order. A patient has one name card only, which is made out at the first admission and to which the reference is added at each entry. In cases where there are two spellings or alternate usage of the surname and given name a dummy card is filed under the second name given, referring to the one used during the patient's stay in the hospital. When a woman reenters the hospital after changing her name by marriage, the former card with references is filed under the married name, the dummy being used in this case for the first name given.

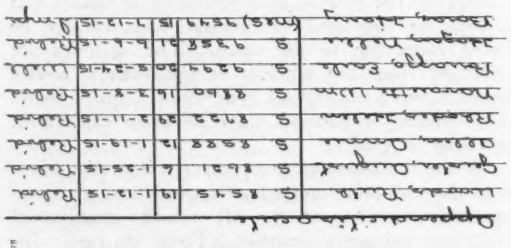

Fig. 4—Diagnosis Card, 7½ x 12½ cm.

4. *Diagnosis Cards* (Fig. 4) contain the diagnosis, name, service, number, age, date of admission, and result. They are made so that the references to eight similar cases can be put upon one card to prevent the catalog from becoming too large. All cases are cataloged and the cards filed according to the Classification of Diseases compiled especially for use at this hospital by Dr. James L. Whitney.[2]

5. *Clinical Index Cards.* A weekly routine in connection with all medical histories is the completion of the clinical index cards, which are intended to make accessible many facts which cannot be included in a diagnosis catalog. They have been fully described elsewhere by Dr. E. S. Kilgore.[3] In future the pediatrics histories are to be treated in the same way.

6. *X-ray Diagnosis Cards.* On the envelope of each x-ray plate the radiographer writes his diagnosis. This diagnosis, as mentioned above, is copied, together with the number of the plate, by the x-ray assistant on the clinical history of the case. In the record room each of these x-ray diagnoses is copied on an x-ray diagnosis card (Fig. 5) and comparison is made with the day-book in the x-ray room to guard against omissions. At the same time a comparison is made with the final clinical diagnosis of the case, and the radiographer's diagnosis is marked confirmed ("C"), not confirmed ("N.C."), or questionable ("?") according to evidence from operation ("O"), autopsy ("A") or general clinical evidence ("Cl"). The help of a member of the staff is of course frequently required to decide whether or not certain x-ray diagnoses harmonize with the final diagnosis.

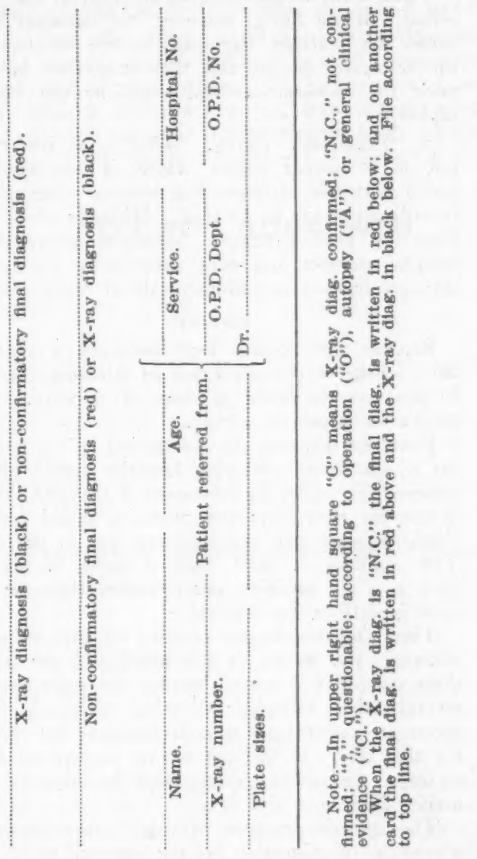
X-ray diagnosis (black) or non-confirmatory final diagnosis (red).
Non-confirmatory final diagnosis (red) or X-ray diagnosis (black).
Name.
Age.
Service.
Hospital No.
X-ray number.
Patient referred from.
O.P.D. Dept.
O.P.D. No.
Plate sizes.
Dr.
Note.—In upper right hand square "C" means X-ray diag. confirmed; "N.C." not confirmed; "?" questionable; according to operation ("O"), autopsy ("A") or general clinical evidence ("Cl").
When the X-ray diag. is "N.C." the final diag. is written in red below; and on another card the final diag. is written in red above and the X-ray diag. in black below. File according to top line.

Fig. 5—X-ray Diagnosis Card, 7½ x 12½ cm.

When the x-ray diagnosis is marked "N.C." the final diagnosis is added below in red ink. It is also written (in red) at the top of another diag-

nosis card (together with the radiographer's diagnosis below it in black), which is filed among the x-ray diagnoses.

The x-ray diagnosis catalog thus has the threefold advantage of indicating (1) plates which show a given pathological condition as determined by the final diagnosis of the case, the usual function of such a catalog, (2) plates of a given condition in which the correct diagnosis was missed (assuming the final diagnosis to be correct) and (3) the radiographic diagnoses of a given condition which were wrongly (according to clinicians or pathologists) so made.

These x-ray diagnosis cards are filed in the x-ray room. Before filing, however, the assistant there copies the "variant diagnoses" on the envelopes of the respective plates, and they may then be laid aside for re-inspection and study by the radiographer.

7. *Temporary Filing.* After each history is put in a manila folder which is numbered in pencil with the corresponding hospital number, the records are ready to be filed. Histories of all services are kept separately, arranged according to hospital number and filed temporarily (i. e., till they are bound) in ordinary cabinet filing cases.

BINDING.

Records are usually kept unbound a year or more owing to the advantage of allowing them to be kept on the ward in cases of re-entry. One service is bound at a time.

First, the histories are checked off by the Service list which shows just what histories should follow consecutively either by admission or transfer. Were it not for these lists the custodian could not be absolutely sure that every history was in its place. The checking is done until a name is reached with no "d" opposite, which shows that the patient is still in the hospital.

Then the histories are counted off into volumes, allowing 350 sheets to a volume. If the 350th sheet completes a record bearing the same date as several other histories following, as many more sheets are counted off as will complete the records for that day. If the last record happens to be a transfer, the records ahead must be inspected for earlier dates.

The records are now arranged chronologically, according to admission to the service, which requires a change only in transferred cases. The order of numerical succession is chronological at date of admission but take, for instance, a patient who entered as a Medical case on a certain date and who was transferred several days later to Surgery. This patient will have two records, but, as stated previously, no change of hospital number will be made. The medical history will be in its proper place according to both hospital number and chronological succession but the surgical history, which starts at a later date, will be out of chronological succession when arranged by hospital number. Therefore, before the volume can be paged this record must be moved ahead, so that it will be the first record of the histories bearing the date when this surgical history began. For convenience in making the index of hospital numbers, a dummy sheet bearing the hospital number and the date to which the record has been set ahead is slipped in temporarily in place of the transferred history to remind the indexer that her next number will be found farther on in the volume and must not be omitted or the numerical arrangement will be incorrect. When a history is transferred from one volume to another a dummy cannot be used but the place where the record can be found is indicated in the index after the records return from the bindery, as will be explained later. Eaeh volume is searched for these transferred cases and all moved to their proper places in order of date.

Next the volumes are numbered and then paged with a numbering machine.

Two typewritten indexes are made, one by hospital number and one by date and name. The first index consists of the hospital numbers of that volume arranged in strict numerical succession with the page on which each can be found in an opposite column. The other index reads across two pages and has the following headings: Date of admission, name, page, diagnosis, surgeon or physician (in charge of case), date of discharge, condition and remarks.

Then a title page is made giving the service, volume number, the dates covered, chief of service, assistants, and a space is left under the heading "Interns" for the signatures of those who were on duty during the dates covered by this volume.

Finally a "pattern" is made for the binder, showing him exactly what is to be printed on the back of the volume and where it is to be printed. These items are as follows: At the top, the year; below this a large letter representing the service (for instance, "M" for Medicine); with the volume number underneath. Directly below the center of the rub comes the inclusive hospital numbers and at the bottom, the inclusive dates. The volume is now ready for binding.

During the process of preparation a history can always be consulted if necessary but cannot be taken from the record room. The volumes are returned from the bindery in less than a week's time, it being understood that this is "rush" work. The binding is done in black buckram cloth with printing in gold.

When the volumes are returned from the bindery, the custodian immediately goes through them carefully to account for all records transferred from one volume to another. These are easily discovered by the number index, for their numbers being necessarily of the smallest denomination have been indexed first, and if the first number of the index is smaller than the first number noted on the back of the volume, it shows that a record has been transferred from an earlier volume. The number is then inserted in red ink in its proper place in the index of the earlier volume, followed by the words "See Vol. —, p. —." In this way every record of a service is accounted for and this avoids all difficulty in finding transferred cases.

The newly-bound volume is once more inspected for any history bearing on its chart sheet a re-

entry reference. All such references are looked up for the insertion of a cross reference, so that each history shall refer to those preceding and all that may have followed. The volume is now complete.

"FOLLOW-UP" WORK.

If a case requires follow-up work, when the patient leaves the hospital the visiting physician or surgeon who has charge of the case writes on the chart sheet in space provided for this purpose, the date when he wishes the patient to be sent for, whom to see, and the items particularly desirable to include in subsequent reports. When the patient leaves the hospital he is told that he will be sent for at this date.

Before the histories are filed each week, "follow-up" cards are written in the record room. These cards contain the patient's name and address, service and number, and the date on which the patient is to be sent for, by which date are the cards filed. Each day a letter is sent out to those patients whose "follow-up" cards are filed under that date, reminding them to return for examination, if possible; or, if not, asking them to send a letter describing their condition. If the letter is returned unclaimed, another is sent out in care of the patient's friend or relative whose address was secured on admission. If the letter is not returned and the patient neither writes nor reports, a second trial is made one month later.

When the patient returns, the "follow-up" letter (which he has been requested to bring) is presented at the front door. In the lower left hand corner of this letter is the reference to his history by service and number. An office messenger is sent for the record before the resident of the service which had charge of the case is notified. The resident after making an examination writes his additional notes at the end of the record and returns it to the record room with the "follow-up" letter. In cases where it is not necessary for the patient to report again, he writes "case complete" on the back of the letter; if not, he writes the date when the patient is to be sent for again. If the case is complete, the follow-up card is destroyed; otherwise the card is moved ahead to the date mentioned on the back of the letter when the patient is to be sent for again. All written answers to the follow-up letters are sent immediately to the record room where they are abstracted and the important notes added to the histories.

OPERATION BOOK.

The operation book has the following headings: Date of Operation, Hospital Number, Name, Ward, Service, Diagnosis, Anesthesia, Anesthetist, Operation, Surgeon and Assistants, Date of Discharge, and Result; and runs across two pages the lines of which are numbered consecutively to represent the operations performed since the beginning of the institution. This book is kept in the operating room in charge of the head nurse. It is her duty to see that all operations are entered each day, that the operation and diagnosis are written in by the first assistant at the operation before he leaves the operating room, and that the date of discharge and result are entered later by the intern in charge of the case.

BORROWING OF RECORDS.

In cases of re-entry, unbound records may be borrowed by the resident staff until the patient leaves the hospital, during which time they must be kept in the ward folder with the current history. Bound records may be borrowed for use at the visit but cannot be kept out of the record room over night. Records borrowed for any other reason than for transfers or re-entries must be in the record room before the closing hour on the day borrowed. A slip must be signed (Fig. 6) before records can be taken from the record room.

No one who is not connected with the hospital may consult records without special permission from the Superintendent. If information from the histories is desired by insurance companies or outside physicians, the Superintendent sends for the history from which an abstract is made in the office.

RECORDS BORROWED

_____
Date

Service	*Number*	*Vol.*

For

The undersigned is responsible for the return of above Records on or before _____

Signed by

2m-12,'14

Fig. 6—Borrowing Slip, 7½ x 7½ cm.

No records except the recent weekly ones which are uncataloged are ever left out of the files over night. It is the duty of the custodian to see that every borrowed record is returned before closing hour and filed before she goes off duty. No record is ever allowed to be taken from the hospital except when ordered produced by a court of law. There are no exceptions to this rule.

It is felt that further advances can and should be made from time to time in the development of the hospital record system. As soon as help for the purpose is available it is intended to have a number of diagrams, temperature charts, blood charts, etc., copied on a large scale from selected records to be used for teaching purposes. Other contemplated extensions of the work are an operation catalog, systematic filing and cataloging in the record room of cardiographic records, pulse tracings, etc. To carry out properly the system described above a trained custodian is necessary.

For a hospital of 100 beds she should have the entire time of one assistant.

References.

1 Myers, G. W.: Care of Hospital Records—according to the Method of the Massachusetts General Hospital, Boston, Mass., International Hospital Record, 1911.
2 Whitney, J. L.: Diagnosis Nomenclature. Boston Med. & Surg. Jour., 1915, Nov. 18.
3 Kilgore, E. S.: Clinical Records in Relation to Teaching and Research; a Plan to Promote Conservation and Utilization of Material. Boston Med. & Surg. Jour., 1915, Nov. 18.

CASE RECORDING.

By H. D'ARCY POWER, M. D., San Francisco.

Presumably, the majority of people hold the ten commandments in respect, and at least profess an attempt to adhere to them. The same is true of case recording, but it is much to be feared that in both cases profession takes the place of compliance. One of our prominent statesmen has been accused of rediscovering the ten commandments and of being a distributer of platitudinous aphorisms. I might be accused of something similar in the subject matter of my paper to-night, as it is something over eighteen years ago when I first called the attention of the profession in California to the importance of the matter, and have repeatedly dwelt upon it since. But, if one may judge from the records of the average office, and from the experience which occasionally crops up in court evidence, there is still ample need for hammering away until the teaching sticks. The matter has been particularly impressed upon me in the last few months, because of the new call on members of the medical profession to be prepared at all times to meet court accusations, sometimes justifiable, more often the reverse, and to defend their professional ability and personal interests against unfounded claims. In one instance, in which it was my fate to be subpœnaed to give evidence in support of one of our colleagues accused, as I believe, unjustly of negligence in practice, no little of the misfortune which overtook him in an adverse decision was due to the entire absence of any record of his observations or confirmatory written evidence of the statements he made in court. If, as it would seem from that decision, any or all of us may be held to account and serious professional and monetary loss, by reason of our not informing our patients of the conditions we have discovered, or suspect, then it most clearly behooves us not only to give such information, but to show, by unquestionable records, that we have so done. The alteration in the conduct of medical work brought about by the accident insurance law, and the obligations it enforces, make a special demand in this direction, and it is in compliance with a general request that I once more dwell upon the best methods of making and keeping such records.

I would draw your attention to the importance of record keeping under three heads, its individual value, its legal value and its value as a basis of accumulating scientific data. The individual value of well taken and easily accessible case records becomes apparent to anyone who has office practice and is called upon, as we so frequently are, to rapidly recall the chief elements of a case returning to us after an interval, when, in the press of a large practice, many of the leading features will necessarily have escaped our memory. Mr. John Doe, obsessed with the importance of his own complaints, is quite unable to understand that Doctor A should have forgotten half a dozen unimportant, but to him paramount symptoms which he may have given on his first visit. The physician who, with case card in hand, is able to anticipate the patient by quickly perceiving and rapidly inquiring as to his ailments, stands a much better chance of retaining the confidence of his patient than he who has to question him all over again.

Secondly, the legal value of case records is simply enormous. Patients' memories are fallacious and their imaginations large. Force of suggestion counts all the time, and statements detrimental to the physician that are sworn to in court, are often made in perfectly good faith, the complainants being the victims of their own or others' suggestions. The physician who has clearly defined and well recorded data of their condition at the time of visit, and the observations and treatment continued from time to time during the course of treatment, and particularly he who goes to the point of keeping photographic records, is in a position to refute beyond peradventure the majority of the statements whereon such cases are based. Moreover, the man who keeps case records in a systematic way, is frequently saved from failures in accuracy that are inherent in himself.

Thirdly, I would draw your attention to the great value of a large collection of case records as a source of scientific information. There is an altogether too widely diffused idea that, for a man to make advancement in medical science and add to its scope, it is necessary to have the facilities and advantages of a hospital clinic; but the work of some of our greatest investigators has been based essentially upon the carefully observed and digested data of private practice. I need only draw attention, as an example, to the monumental work of Mackenzie on the heart. If our cases were not only recorded, but analyzed from time to time, they would afford, at least in the case of large practices, most valuable data for use in the practice of the physician, but also for the writing of papers on individual diseases or symptoms.

MODES OF RECORDING.

In keeping medical records, and in fact, in all medical practice, I have always maintained that the only safe procedure is that which considers every case that comes under our care as having possibly unknown and serious elements, and the only method to discover such a rigid routine, to be automatically followed as part of our every day method of working. I realize that the acquirement of such a method is largely dependent upon careful and systematic training of the student in his third and later years of study; and, whatever facility I may have is due to the rigid enforcement of careful case taking in the clinical teaching in the school at which I had the privilege to study. I have to thank Sir Mitchell Bruce, one of the most painstaking analysts that I have ever met, for the automatic facility in recording which has been my practice throughout my medical life.

These things are not so easily attained in our post-graduate career, and should form the basis of ward teaching. It is with this in mind that I particularly commend the advice given by Dr. Kilgore, in his recent paper on the subject, published in recent numbers of the STATE JOURNAL. But the work which is thus demanded of a student is almost impossible in the case of the busy practitioner running a large practice; nor in the case of physicians dealing with institutional work is it always possible at the bedside to wade through the mass of information contained in the full report provided for by Dr. Kilgore's excellent method. What is required is a means of rapidly jotting down results, as the routine examination is made, and placing them in such relation as to enable the physician to rapidly grasp, on second inspection, the salient points of his findings.

Equally, in keeping a record for office use, there is need to be able to quickly perceive the important observations without wasting time on negative findings. Something like fifteen years ago I commenced to devise for myself a case recording chart that should fulfill the following requirements:

First, to give the maximum data in the minimum space. Secondly, to provide for extended observations on special points. Thirdly, to allow of the elision of negative findings. Fourthly, to replace written statements as much as possible by graphic symbols. Fifthly, to provide a place for special reports, and sixthly to allow of stamp and photographic records. In addition, it is desirable that the visits made and prescriptions given should appear on the same chart. The particular form that I have at last chosen and have now for many years worked by, accompanies this paper (Fig. 1). I think I am right in claiming that it fulfills all these demands. By the use of signs, practically no space is wasted, while reasonable provision is made for conditions requiring fuller description. The mode of recording follows the natural line of investigation in the majority of cases, dealing first

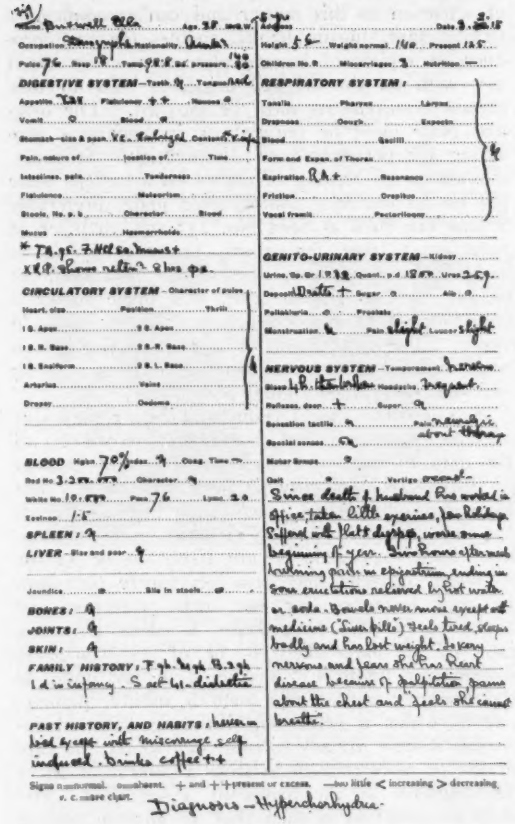

Fig. 1.

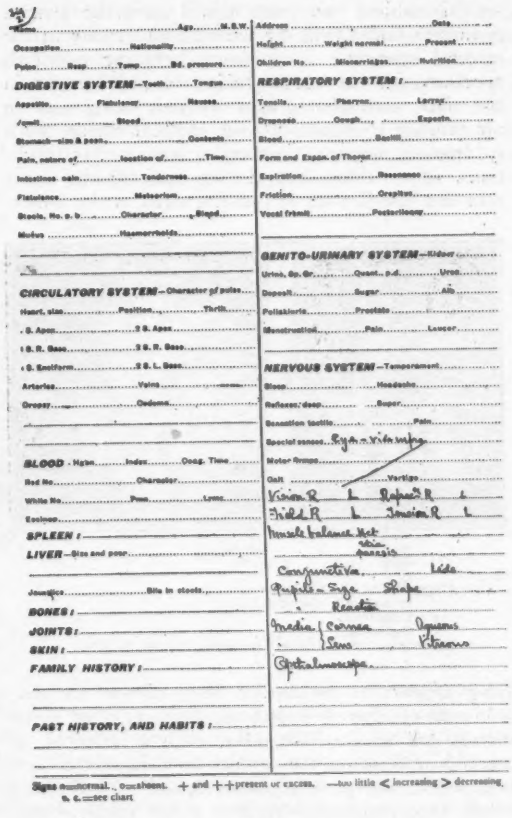

Fig. 2.

with the general symptoms, a knowledge of which is common to all cases; then, taking up under special headings the symptomatology of each of the great physiological functions so that oversight is almost an impossibility. It is not necessary to dwell on each of these in detail, but I would like to point out here that by the very short and easily recognized position of each important symptom, it is possible for a writer dealing with any given subject, let us say, for example, abdominal pain, to take a group of one hundred such cards and in a few minutes obtain the data involving the said symptom for further consideration and report.

In my practice I have these cards printed 6

inches by 10, and use the blank space on the left for writing in a synopsis of the complaint or special symptoms (vide Fig. 2). The back of the card is reserved for notes or charts as may be required. They are kept in a card index drawer of my desk and thus give me immediate access to a patient's record directly he enters. Furthermore they are most convenient to carry to the bedside, aiding the memory in obtaining a complete examination. In consultation this is very important as the conditions usually present are not conducive to note taking.

The next method of recording which I would draw your attention to is the very great value of photographic records taken to scale. In a paper on this subject two years ago, I gave the general principles underlying the use of photography in the medical sciences. I reproduce here the essentials necessary for the actual taking of photographs in the office, such photographs not only being used in my practice to record obvious physical change, such as dropsies, wasting muscles, neuromuscular conditions, skin lesions, but also to indicate the exact area and distribution of physical signs in the underlying organs; in the case of lung disease, the distribution of altered resonance, conduction of voice sounds and adventitious noises such as crepitus, is marked in signs on the surface by means of a carbon pencil, the patient photographed to scale, the whole time required being but a few minutes and the record of such absolutely unassailable character as to carry conviction, either to the patients themselves in later stages or to the court, in the event of disputes. A pending damage case for supposed disfigurement might well depend for its decision upon the presence or absence of such a record. My own preference is for making all photographic records, medical and surgical cases, stereoscopically, the trouble being no greater and the information conveyed being very much more precise and useful. The modus operandi of making such photographs is given at the end of this article. Yet another aspect of recording is present in the making of X-ray plates and copying them for case filing. The original X-ray plate is usually a large, and always a fragile affair. It is a matter of daily experience how, on inquiring for an X-ray plate, taken at some previous time by possibly another practitioner, one is told that it was either lost or broken, so that prints should always be made. The great objection in this matter is that the average photographer is not able to reproduce on paper the subtleties of gradation that possibly distinguishes a misplaced kidney or a gall-stone from the surrounding tissues. Nor, as a matter of fact, is it much better when we commission them to reproduce the original plate as a lantern slide. The latter is coated with an emulsion that is nearly as incapable of reproducing correct gradation as ordinary photographic paper, and important differences in structure are commonly lost in diapositives so made. I have given a great deal of attention to this matter and can recommend a technic that, in my hands, enables me to reproduce on a plate of lantern plate size, every detail met with on the original negative. To do this, certain requirements must be satisfied. The original plate must be reduced in an apparatus providing for perfectly even illumination. Secondly, it must on no account be copied on a lantern plate but on an ordinary photographic plate, preferably a slow one such as Seed No. 23; and, in place of reducing it from, let us say, 14x17 to 3¼x4, it is better to choose an intermediate reduction, let us say 5x7, and then from this make either a reduction on to a process plate or glossy bromide paper. The final result is not a positive but a negative having the same exact gradations of light and shadow as the original plate.

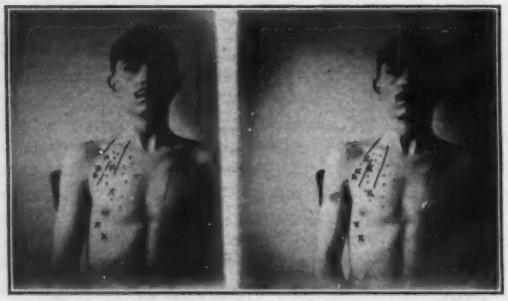

Fig. 3.

Pulmonary Tuberculosis.
///=Increased Conduction.
xx=Crepitus.
::::=Dulness.
Example of Clinical Record—Scale 1/10th.

And lastly, I would claim a place for the value of what may be called a collective record of all the data in cases in which there is any element of dispute or possibility of later contention. For example, some of us, particularly specialists, are apt to be involved in cases in which other opinions have been expressed, or are likely to be so, or in which contests may arise on future occasions. In such instances, for our own protection, we ought to be able to procure, at short notice, a copy of all data likely to be of importance to sustain our findings. A case is in my mind at the present time of just such a nature, namely, one in which a gentleman suffering with an incurable disease already having been under the care of one or more physicians, seeks a determination of his diagnosis at the hands of a specialist. His physical condition is such that an adverse finding is likely to be detrimental to him; on the other hand his position in society is such that an arranging of his affairs in the expectation of early demise is of importance to his friends and relatives. The specialist in the case, pressed by conflicting interests and opinions, urged on the one side to tell the exact status of the case, on the other to withhold what in his belief would be depressing and harmful information, is compelled to follow his own judgment, with certain condemnation from one side or the other. In this instance one physician, in writing, advises that the information should be withheld, another that the information should be communicated. All these facts, which would probably in the course of a few months be forgotten, might, in the event of a lawsuit be of paramount importance to the consultant. It is

a simple matter in such cases to assemble all the documents relating to the decision actually made together with that decision, and photograph them collectively on a small plate, which at any later stage may either be read with a lens or reproduced on a large scale, thus doing away with the necessity of lumbering up the record books and files with unnecessary documents. I would suggest that when this course is proceeded the date of the record be substantiated by enclosing in the assembled papers the head-lines with the date of a current newspaper.

I will conclude with a description of the eseential points in the making of photographic records which will apply equally to medical, surgical or pathological subjects:

In all cases we must secure the following results:

1. Accurate drawing.
2. Perfect texture.
3. Correct scale throughout.

Accurate drawing is dependent on a correct relation of the camera to subject. The greater number of the photographs that I see taken by medical men show incorrect drawing from failure

Fig. 4.

to correctly place object and camera. The essential requirement is that the plane of the lens and that of the object shall be parallel to one another. If the object is to be taken from above, the camera must be suspended above it; if vertical, the camera likewise. The average photograph, such as the surface of chest or abdomen, is best taken by resting the camera on a flat surface such as the table, or on a camera stand with a fixed base. The center of the lens should be opposite the center of the area to be photographed. If the plane recede, then the camera should be tipped to an equal angle. Probably the most difficult matter is to so place the object, or part of the body, that the same position can easily be repeated on a future occasion. For the whole body this is comparatively easy. The patient should stand against the wall, with heels and occiput in contact. This will necessitate the shoulders being thrown out.

The abdomen is preferably taken in the same posture, but for tumors, the body should be on the back and the camera supported above the patient.

The thorax can well be taken with the patient sitting in a chair. (Figs. 3 and 4.) This is my own daily practice. Care is needed that the spine is held rigid, that the shoulders are at the same level and the arms parallel. The position of the head should be such that the ears are equally visible on either side, and the root of the nose on a level with the lobes of the ears. Though this may give slightly altered relations between different individuals, it secures equality of position in succeeding photographs of the same. Photographs to show pathologic conditions of the extremities are difficult and the position must be determined by the peculiarities of the case. For the hands a piece of (corrugated) pasteboard placed in front of the chest on which the hands are extended affords one of the most satisfactory and simply attained arrangements.

Finally, we must remember that with moving surfaces, such as those of the chest and abdomen, the drawing will vary with the phase of respiration. Therefore the practice of always exposing at a given stage should be adopted. My rule is to call for three deep respirations, then stop the patient midway in expiration and direct the breath to be held during the exposure.

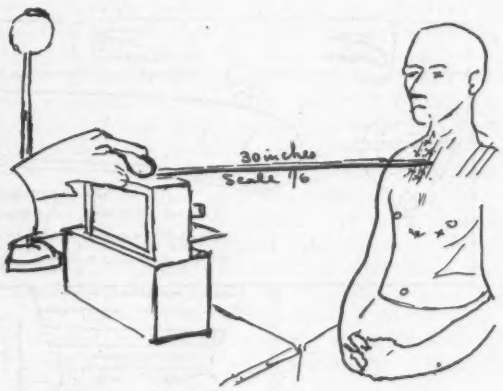

Fig. 5.

Modeling and Texture. Lighting.—While drawing is chiefly dependent on posture, texture and surface relief are chiefly a matter of illumination. Principles, not rules, are our only guides here. Surface relief is dependent on the formation of shadows. A considerable elevation of the chest or abdomen will entirely fail to show on a photograph if the light falls on it at right angles, so that no shadow is formed. It may, on the other hand, be greatly exaggerated by a too oblique illumination and the only rule is so to place the patient in reference to the light that the desired effect is plainly visible on the ground glass, or to the eye of the worker when viewed from a position near the lens. Sharpness of texture is not only a matter of direction of light, but also of diffusion; the nearer the source of illumination approaches a point the better will texture be represented. For this reason, I am much in favor of the use of flashlight for photographs, such as those of skin, in which texture is the main consideration. Furthermore, the use of flashlight permits of photographs of moving surfaces, such

as the tongue. With the enclosed flash, such as that of the Victor apparatus and others, it is possible to use the apparatus without causing any smoke in the office or ward.

Scale.—In the use of photography for scientific purposes, no point is more important than the provision for accurate measurement of the parts depicted. There are two ways of obtaining this result. One is to take the whole picture at a given scale of reduction; the other is to include a measuring rod or tape in the group by reference to which the size of parts may be determined. As usually employed, both methods frequently fail in accuracy. In the first case, with a short focus lens used at a short distance from an object such as the human body, the far and near planes depart considerably from the standard of reduction, which must necessarily have been determined for a flat surface. By the second method, truth is only obtained by applying the image of the measure to the plane of the surface on which it is lying. Also, I would note that the common practice of using the regulation tape measure gives an image that is frequently illegible. The following method will give good general accuracy and provide for the correction of any secondary error. First, arrange the camera to take at four scales of reduction. These will depend on the size of camera used. I employ a small camera—4½ by 3½ inches. On the ground glass a six-foot man would occupy 3 inches at a reduction of 1/20th. The thorax, abdomen or head can be taken at 1/5th, or better, 1/6th, and skin texture, small tumors, tongue, eyes, etc., at 1/4th. Place on a well-lighted wall a three-foot flat rule. Set up the camera in front of it and move it until the image of the rod in sharp focus occupies 1½ inches on the ground glass. Mark on the base-board the position of the bellows. Measure the distance between the camera and the rod and inscribe this beside the mark on the base-board. Now approach the rod until its image covers 3 inches in focus. Again mark base-board and measure and inscribe distance of rod from camera. Repeat this procedure so that 18 inches on the rod occupies 3 inches on the ground glass, and lastly that 12 inches occupies the same. When the base-board has been marked and the distances recorded, we are saved all future focusing troubles—and these are among the commoner causes of failure—and our images will in a general way be true to the chosen scale. Only in the case of the larger images, the 1/6th and 1/4th, it may happen that if the image is that of a receding plane such as the thorax, a difference of scale between the near and far planes will appear. If only one of these is required in the record, we simply measure our distance from the lens to the desired surface and that will then be in true measure. But if the record is to include both far and near planes, we must take our measure to a point 1/3 behind the front plane and secure depth of focus by stopping down the lens. The resulting picture will look correct but will measure too much in the near plane and too little

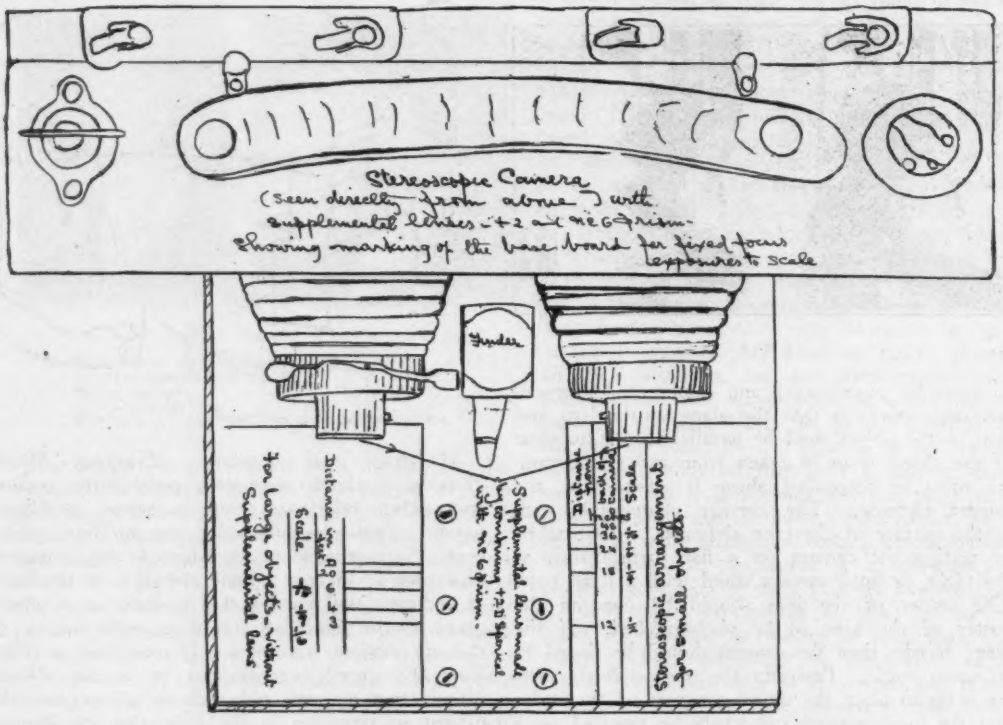

Fig. 6.
Stereoscopy in Skin Disease.
Scale ¼.

in the distant one. Usually the error is trifling, but its correction is very simply provided for. If a strip of 1 inch surgical plaster be stuck on the body in the direction of the receding plane, the variation in the width of its image will provide the means of correcting any error due to perspective. And here let me say that those who do not care to fix their cameras for definite reductions can always insure a means of correct measurement by the use of surgical plaster. It is cut by machinery to accurate width. A piece of known width stuck on the surface to be photographed provides a sure scale. Personally, I keep in my card case a few pieces of lantern slide binding, cut to 4 inches (10 cm.) long. It is ½ inch wide and very black. It always photographs distinctly and is most useful.

General Technics.—I wish to conclude this paper by a few remarks on camera, plates, and papers. It is an entire mistake to imagine that expensive apparatus is essential or even valuable in medical photography. The fact is that in order to get the depth of focus we need, we are compelled to work with short focus lenses at small aperture, and under such conditions any kind of a lens will give sharp definition. There are just two conditions really essential. The camera should be strong and capable of enough extension to work at a scale of reduction of at least ¼ the actual size. Many useful cheap cameras fail in this latter respect but can be so used by the use of a supplemental lens. Such lenses are sold under the name of "portrait attachments," or can be readily ground from ordinary periscopic spectacle lenses, + 1 or 2 being usually sufficient. A focusing screen is not at all essential. It is much better to work by measurement at fixed distances than to attempt to focus. If the camera does not possess a focusing screen it will be necessary to remove the back and place a piece of ground glass in its place while making the observations previously described. All plate cameras have, however, a focusing screen, and I strongly

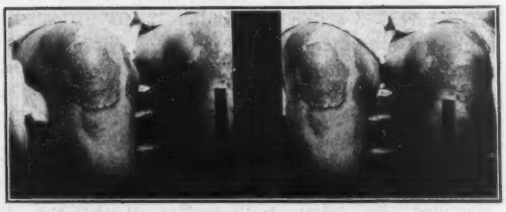

Fig. 7.

advise the use of plates in preference to films. There are several reasons for this. Plates are easier to handle, they can be obtained in various grades and with special qualities. Thus, much of the material we photograph is yellow or reddish in tint. The ordinary plate is quite insensitive to these colors, and the plate should be a panchromatic plate, which is specially sensitized. It is best used with a three time color screen, which cuts out the excess of blue rays. In development the object should be to obtain good detail and avoid unnatural contrasts. This is best attained by full exposure and development with a rather weak developer. I use Rodinal, which is the simplest of all preparations to employ. Prints are best made on Glossy Bromide Paper, which is not so contrasty as the gaslight varieties. There is a current superstition that prints for half-tone reproduction must be made on "Solio"—this is a thing of the past.

Stereograms.—It stands to reason that records presenting the aspect of three dimensions afford much more information than pictures in two. There are many conditions that are very difficult or impossible to show by an ordinary photograph that are perfectly clear in a stereogram; thus, among skin lesions, macules and flat papules are cases in point; varying muscle tonus as seen in facial palsy; surface protrusions, as in aneurysms and hernias, often quite unrecognizable in a flat picture, are shown in full relief in a stereogram. The chief difficulty at the present time is in the matter of apparatus. The average stereoscopic camera is provided with short focus lenses and does not take objects nearer the camera than six feet. At this distance the scale of reduction is about 1/20 and this is altogether too small to show skin conditions or small changes of contour. If the bellows length is increased and the object approached closer, the angle of divergence between the two images becomes so acute that they fall outside the limits of the plate. Some three years ago, I showed (*vide Camera Craft*) how this can be rectified by the addition of +2 spectacle lens and No. 6 prisms. With a Stereoscopic camera so modified, I take all my ordinary clinical photographs with ease and rapidity. I can take at any desired scale of reduction from 1/20 to 1/3 natural size. The resulting pictures can be viewed with a stereoscope, or, with a little practice, seen in relief by the unaided eye. (Fig. 6.)

A STUDY IN HANDICAPS*

By FREDERICK GRAZER, M. D., and F. F. GUNDRUM, M. D., Sacramento.

At a meeting of the Sacramento County Hospital staff about a year and a half ago a new interne asked the question, "Why do people have to come to the County Hospital anyway?" Thereupon succeeded a discussion among us and very unexpectedly we found a considerable divergence of opinion. The question, of course, resolved itself to whether the economic stress in Sacramento County had become acute enough that an average individual was unable to take care of his medical wants, or whether the most of our clientele had some additional burden affecting earning capacity, that is were "handicapped." In order to investigate this question we undertook a short clinical and social history from entrants to the hospital together with a superficial physical examination. It was impossible to secure data from all admitted consecutively. We obtained, however, records of 1000 patients between July 1, 1914, and September 1, 1915, during which time 3,696 were received. The cases studied were taken hap-hazard when

* Read before the California Northern District Medical Society, November 9, 1915.

there was time. The series, however, does not accurately represent the hospital admissions for these reasons. All acute and accident cases which required immediate attention could not, of course, be held up in the admission room for questioning. All children were excluded as it seemed unlikely they would furnish any data of interest. Of the 3,696 admissions 2,789 were male and 907 female, a ratio of 3 to 1, whereas of the 1000 studied 975 were male and 25 female. This preponderance of males undoubtedly increases certain handicaps which appear in rather surprising numbers. In other words, our study has had more to do with men, most of whom are single, and very many of whom are "Hospital Nomads." Not a few of these indeed, have a "system" whereby one winter is spent in the Sacramento Hospital, the next in Amador, next in El Dorado, etc. It is among these that we would expect a greater proportion of "handicaps"; but it is also these who, exclusive of accidents and acute diseases, keep the hospital full. Our method of investigation was briefly as follows: Upon arrival a short history was taken and superficial physical examination was made to include the following factors: Sex, age, nativity, social conditions, mentality, education, knowledge of English, physical development, vision, hearing, speech, deformity, certain habits, and certain diseases. The habits investigated were alcohol, tobacco and drug taking; the diseases were tuberculosis, epilepsy, syphilis and gonorrhea. Old age, poor mentality, poor education, poor knowledge of English, physical feebleness, deafness, etc., sufficiently great to constitute a definite drawback in making a livelihood were considered "handicaps." The entrants were then classified as "unhandicapped" or "handicapped." We tabulated also, nativity, social condition, and gonorrheal infection for the satisfaction of our own curiosity not from the expectation of demonstrating a handicap along those lines. There may be a doubt as to how much of a handicap "poor education" is to a laborer. It seems fair to us, however, to include our group as handicapped inasmuch as a fair number were unable to read and write and none had passed the sixth grade.

Results: One hundred and forty-nine were admitted with no handicaps. The remaining 851 presented one or more impairments to earning capacity, divided as follows:

Age: Four hundred and eight were over 50. We fixed upon 50 as a limit beyond which age would constitute a handicap because early in the series we found that nearly all of our entrants over 50 showed a considerable physical enfeeblement.

Mentality: There were 174 of frankly defective mentality.

Education: Five hundred and fifty-nine were "poorly educated."

Knowledge of English: One hundred and eleven were foreigners with insufficient knowledge of English to understand or to make themselves properly understood.

Physical Development: Four hundred and fifty-nine patients were in such poor physical condition as to be incapable of active physical work. This large proportion is due undoubtedly to a high percentage of old men admitted to this institution which itself has the "handicap" of being an almshouse as well as a hospital.

Vision: One hundred and eighty-eight were seriously defective.

Hearing: One hundred and sixty-one were deaf.

Speech: One hundred and twenty-five had difficulties with speech. This includes the 111 who did not speak English and 14 whose enunciation was bad.

Crippled: Forty-nine patients were crippled.

Habits: Alcohol: Upon the subject of alcohol there is much acute difference of opinion among the populace at large, and, although to a somewhat less extent, among the profession as well. We classified our material as excessive, moderate, and non-alcoholic. About the third group there can be no difference of opinion: 132 confessed themselves not drinkers; 378 drank excessively enough so that they were not able to obtain or hold work readily on account of drunkenness; 490 were classified as moderate drinkers because, first, their drinking was confined largely to wines and beers; second, they did not go on sprees and did not lose time or jobs on account of drink.

Tobacco: Thirty-three patients showed symptoms of nicotinism—we called them excessive smokers; 166 did not use tobacco; 801 used tobacco habitually without any objective findings.

Drugs: Thirteen admitted the opium and three the cocain habit. These figures are undoubtedly too low because drug habitues are notorious liars and it is often possible for a morphinist to remain for a considerable time without detection in a hospital to which visitors are admitted.

Diseases: Epilepsy: Three patients, an unexpectedly low figure.

Tuberculosis: One hundred and six showed tuberculosis sufficiently developed to be easily recognized. This number is also too low because a more careful physical examination would often have revealed active tuberculous areas in patients admitted for other things.

Syphilis: One hundred and fifty patients had or had had syphilis. We classified this infection as a handicap, inasmuch as very few of our patients could lay reasonable claim to having been cured.

Gonorrhea: Four hundred and seventy patients admitted gonorrhea, 47 per cent. of the total. We classified this group as a matter of personal interest. Loss of earning ability following Neisser's organism was apparently inconsequential compared with the other handicaps that we have under consideration.

Nativity: Four hundred and fifteen were foreign, 485 American born.

Social Condition: Seven hundred and nine single, 114 married, 137 widowed, and 27 divorced. The number of singles is too high because of patients denying existing family relations for various reasons.

CONCLUSIONS.

No. 1. Of 1000 entrants 851 were "handicapped." Among these 851 patients 2809 handi-

caps appeared, an average of 3.3 per individual: 1247 (44%) of these handicaps were possibly remediable; 1562 (56%), 1.8 per individual, were probably irremediable. We hoped to be able to get figures on transmissibility, but soon found this phase of the question too complex. We can, therefore, present only our 150 luetics and about 75 of the mental defectives, as instances where the transmission of the handicap might fairly be expected.

We hesitated at first to present to this Society the results of an inquiry which so manifestly borders upon the sociologic. We are but too prone to forget the very intimate relation of the medical profession to many sociologic questions. It seems to be true that the modern "social movement," so-called, has been initiated largely by others, although the medical men of the country have been in a position to learn and understand the origin of this movement perhaps better than anyone else. There has been in the past twenty years a very great extension of group regulation of private affairs. The medical profession as a whole is vitally interested in many phases of the problem. We are now operating under the excellent "Workmen's Compensation Law." The questions of social insurance, sickness insurance, old age pensions, etc., are undergoing active discussion and investigation, the former by a State Commission. This is to be expected as a logical stage of social evolution; for just as soon as man has come to live in groups, modification of the conduct of each individual of the group is begun. At first, of course, this is primitive, but later as the group becomes larger and the interrelation of units more complex, regulation is necessarily extended to cover an ever-increasing proportion of the activities of the individual. All attempts to extend this regulatory function have been as a matter of course opposed. As the group develops social intelligence, however, a proportionate regulation ensues. The true history of civilization does not consist of the recital of the "War of the Roses" or of the "Napoleonic Campaigns." It is the story of the regulation done by the various groups of men for the advancement of those groups. By whatever train of thought we approach the question of social regulation of individual affairs, we cannot, if we but follow the matter to its logical end, escape from the consideration of some form of regulation of humanity itself. It is upon the quality of the human units that the continuance of civilization depends. The vast majority of other regulations adopted by civilized men have concerned themselves with food supplies, water supplies, military necessities, etc. We can find without difficulty instances of high civilization going to pieces from within because the talented group who built the edifice left no descendant of sufficient ability to carry on the necessary machinery.

MEDICAL SOCIETY STATE OF CALIFORNIA MEETS IN FRESNO APRIL 18, 19, 20 1916

DEPARTMENT OF PSYCHOLOGY IN LOS ANGELES CITY SCHOOLS—A STUDY OF THE MENTALLY DIFFERENT.

By LAURA B. BENNETT, M. D.,
Psychological Examiner, Los Angeles.

The psychological department of our schools is an extension of the medical supervision of pupils to include not only the detection of physical defects and contagious diseases, but also the scientific examination and study of abnormal mental and moral development.

A knowledge of the mental development of the child is quite as essential for the determination of his educational activities as is that of his physical development, and especially is this true of the mental deviate.

While the work of this department is chiefly with the mentally deficient, it is also with the mentally peculiar and precocious, the incorrigible and misfit, the truant and delinquent, and with those with nervous disorder and disease—the epileptic, choreic, hysteric, etc.

Its purpose is to inquire into the cause of these abnormal states, to study systematically the conditions found and to advise or recommend the training, treatment or education seemingly best adapted to the child's progress.

Through the Binet-Simon and other psychological tests we are able to analyze, measure and rank the mentality of the individual examined.

This method is not by any means an infallible mental measuring stick, as some examiners would have it appear, for the mind is immeasurable, and even after the expert has made the most complete exploration from every known angle, there remains the "residuum that cannot be resolved."

We have, however, in these tests a practical means whereby we may determine whether a child is normal, supernormal or defective.

The Yerkes-Bridges Point Scale, combining the Binet-Simon tests with others from various sources, has been found by the writer to be superior to the Binet alone. It gives fuller information of the chief mental functions of the individual with less time and work. It allows partial credit for an incomplete answer. It is more reliable for pupils beyond the age of ten and it takes into account the social, industrial and racial differences.

The scale presents twenty tests, with their subdivisions, for measuring the principal mental functions, applicable to pre-adolescents over three years of age. One hundred credits are allowed as full value of these tests, and the credits obtained in an examination are interpreted from tables of norms.

The result of an examination may be expressed in various ways. For example: A nineteen-year-old adult examined, scores 56 points. The reference table shows the score of a normal English-speaking adult to be 90 points, and it also indicates 56 points to be the average of a boy of only 9.1 years.

Then we may report him thus: Chronological age, 19 years; score, 56; norm, 90; coefficient of intellectual ability, 62; mental age, 9.1 yrs.; mental status, 9.9 yrs. (difference between mental age and chronological age).

Following are the Mental Processes tested with credits:

MENTAL PROCESSES	CREDITS
Motor coordination	4
Perception (visual)	13
Discrimination (visual)	1
Discrimination (kinaesthetic)	4
Association	4
Suggestibility	3
Memory	4
Memory (auditory)	11
Memory (visual)	4
Imagination	4
Judgment (aesthetic)	3
Judgment (practical)	8
Judgment (logical)	11
Analysis and comparison	6
Ideation	20

When a more thorough investigation is desired than these tests make available, that is, if we wish to measure a specialized defect or a superior ability with greater accuracy, then we make use of laboratory materials and apparatus for that purpose.

SUPPLEMENTARY TESTS.

For determination of motor ability, the tapping board for testing quickness and rate of movement; the baseboard for steadiness of movement, etc.

Estimation of sensory ability, tuning forks for pitch discrimination; weights for pressure sense; esthesiometer for cutaneous impressions, etc.

Perception,—form boards.

Range of attention or mental grasp,—tachistoscope.

Association,—part-whole and opposite tests.

Creative imagery,—Ebbenghaus completion test and puzzles, etc.

Logical reasoning,—mathematical problems.

Ability to acquire new motor coordinations,—mirror drawing.

Facility and accuracy in mental acquirement,—association of a known new symbol with an unknown.

Memory,—narrative, aussage, test, etc., etc.

At least 10 per cent. of our school children are in need of a general mental classification now. They are so mentally different from the others that they cannot progress in the ordinary grades. Many of them are repeating their grade three, four and even five times at an enormous expense to the State, for they not only do not progress, but they hinder others and consume the teachers' time and energy uselessly. If they are allowed to drift along misunderstood and with their weakness uncared for, most of them will further degenerate and some of them later will become the criminal and undesirable dependent. A large number of these repeaters of grades, probably twenty per cent. of them, belong somewhere in the following classification of the feeble-minded:

MENTAL DEVELOPMENT.

Age at or Over	Years	Classification
6	Practically none	Low-grade idiots
6	1	High-grade idiots
8	2	Low-grade imbeciles
10	2-4	Middle-grade imbeciles
12	4-6	High-grade imbeciles
12	6-8	Low-grade morons
14	8-10	Middle-grade morons
14	10-12	High-grade morons

Important as may be the proper care of the lower grades of the feeble-minded, yet it is with the higher grades—the morons—that we are most concerned. The high-grade moron generally passes as normal. His associates regard him, perhaps as a little dull or unpliable in some ways, and it is only after he goes out into the larger world than home or school, that his limitations become seriously defined. Then we find him shifting from one kind of work to another and making a failure of everything be undertakes. He cannot compete with others. He is a reed before the wind and falls a weakling to everything in his path. What will become of him depends almost entirely on the environment he falls into. If he remains in indifferent environment, he becomes a harmless good-for-nothing, earning an uncertain living, or more likely, depending on relatives or friends or the state. If he drifts into evil environment, he becomes the dupe of criminals, and will probably bear the punishment of crime either instigated or committed by them. If a sweet fate tosses him into the path of some love-struck maiden, he may even marry into good stock and continue to dilute the race with his kind of degeneracy.

But if a kind fate allows the psycho-examiner to find him early enough, his incapacity is discovered, and it is probably related to an hereditary history which gives this weakling no more power to make a success of his work than it gives him a right to propagate his kind.

The psychologist finds him but twelve years old mentally and with a capacity for only the simplest kind of work. His parents are apprised of his limitations and needs, with the result that he is given a simple industrial training that enables him to fill his little niche in the world with some degree of usefulness and out of harm's way.

It is of great consequence to the community as well as to the defective, that he be placed under early training before the weak nervous centers deteriorate and become too unreceptive to stimuli. The earlier the defective child comes to the skilled teacher, the better for both.

Our special schools provide this training to a limited extent. It is essentially manual. In the academic work all lessons are short and enlivening to the senses, with much repetition to help fix the impressions on the dull brain cells; and frequent rest and change are given, for these children have little nerve reserve and fatigue easily.

But it matters not how much we may do for the defective child, he can never rise above his

mental level. It is fixed; for the cause, as we know, is always something that has permanently injured or hindered the development of the higher mental centers and their associating fibres, and left them powerless for normal functioning.

The best we can do for the present generation is to give such training as will help to establish habits of industry, usefulness, morality and honesty.

The real problem is how to prevent the re-appearance of this mental blight in future generations. It is estimated that there are 400,000 feeble-minded in the United States, and that two-thirds of this is caused by heredity. It would seem then, that the logical solution of the problem must come through the teaching of the principles of eugenics. Mendel's law as applied to feeble-mindedness may be briefly stated thus:

When both father and mother are normal, and their ancestors normal, all their children will be normal, and they cannot transmit feeble-mindedness.

When both father and mother are feeble-minded, all their children will be feeble-minded.

When one parent is normal, with no feeble-minded ancestor, and the other parent is feeble-minded, their children may not be feeble-minded but the defect will appear in the following generation.

Equally important as the mentally deficient child is the early recognition of the child with unfavorable temperamental qualities and constitutional conditions, indicating nervous affections and mental instability. Such recognition may enable the examiner by judicious and timely treatment, to counteract or correct the defect, or possibly prevent its development; and this may mean to the child the difference between future health and disease.

But if the defect is allowed to develop, the child may deteriorate into a superior type of defective—a type that blends so imperceptibly into the adult standard that under ordinary conditions it passes as normal.

Such children do not react normally to average moral or intellectual education. The fault, probably, is with their weak or defective nerve cells, which are of such a nature that they fail to carry external impressions with sufficient force to reach the brain centers, or, if the impressions reach there, the cells of the cortex are too weak to retain them.

Many of this type are the youths who have mind enough to get into criminality and not enough to keep out. In other words, they become criminal by defect. Without higher centers with strength sufficient to inhibit, they are led by their lower instinctive impulses and when the restraining influence of parent or teacher is gone, they become the irresponsible criminals. Whose fault is it? You are a responsible being, because through a normal nervous system your mind is in control of your body; but if because of a defective or poorly developed nervous system some one fails, who is to blame? Not the unfortunate defective, surely, but the cause that made him so, or left him so—that failed to develop in him resistance to environment, or failed to make for him environment that he could resist and adapt to his existence.

It is a fact that under favorable conditions these undesirable characteristics may diminish or entirely disappear.

The treatment consists in the application of such measures as will stimulate and strengthen the weak nerve cells into healthy activity—to improve and enlarge the functions of the higher centers which are lacking. This is disciplinary education,—moral, intellectual and hygienic.

Another type of interest to the psychologist is the pupil of superior intelligence and marked talent. He must be found early and guided along lines of activity suited to his capacity, thus to improve and conserve his potential powers and direct his energies into their broadest fields of usefulness.

While the psychological tests have not attained to any great degree of accuracy with this latter type, they are of considerable value in finding superiority of the higher psychic functions. To find these and other types of children equally in need, and to prescribe their treatment is not to be expected even of the expert teacher. It is a difficult and painstaking task and exercises the resources even of the psycho-physician.

When psychological laboratories become fully operative in doing what they can do and ought to do for our schools, mental deficiency will be early and rightly segregated and trained with better understanding. Truancy and delinquency will be more intelligently studied and more sanely managed. Degeneracy and criminality will be decreased. A large amount of energy hitherto wasted will be conserved for profitable fields of operation. Individual training will receive greater attention. Early fitness for vocational training will be determined and its blessings will be more widely distributed. Special gifts and aptitudes will more surely find their proper channels of expression. Application of the principles of eugenics will become more general as the main root of most mental and moral troubles is laid bare. Educational activities will become more rational and natural for all, and increased efficiency will characterize education as a whole.

CONCRETIONS OF THE SPLEEN.

By BENJAMIN JABLONS, M. D., San Francisco.

Spleen stones, although of little practical importance, are interesting because of the infrequency of their occurrence. The factors underlying their formation, and the character of the stones themselves lend added interest to this pathological entity. The specimen in question was found at autopsy, and like the cases previously reported was an accessory finding only. The spleen stones in the case of the patient reported below, as well as those cited in the literature, played no causal role in the death of either of these individuals.

In a thorough search of the literature, there have been only two cases previously reported.

Sailer presented before the Pathological Society of Philadelphia in 1898, a spleen which contained one calculus, that he had found at autopsy. The patient from whom it was removed was an old man, the cause of death not being mentioned. The stone was 0.5 cm. in diameter and its surface

was smooth. He considered it to be a calcified thrombus. He gives no review of any preceding literature, but states that Orth mentions the condition as having been occasionally met with.

Dufour in the "Bulletin et Memoirs de la Societe Medicale des Hopitaux de Paris" reported a case of spleen concretions that he had also encountered at autopsy. The patient was an old man who had been suffering from chronic bronchitis and emphysema, and at autopsy a healed pulmonary tuberculosis that had been followed by pulmonary sclerosis was found. The spleen was apparently normal, but one section contained six small, hard nodules which were easily enucleated. The average size of the stones was that of a cherry pit, and they were each surrounded by a thick membrane. On chemical examination, the stones were found to consist of the salts of calcium, magnesium and sodium, the carbonates and phosphates predominating.

The liver contained one stone which was about the size of the head of a pin, and similar in character to those observed in the spleen. In discussing the case Dufour considers the stones to be calcified miliary tubercles of the spleen, although he does not rule out the possibility of their being

Fig. 1.

calcified hydatid cysts. The presence of pulmonary tuberculosis and the simultaneous presence of the spleen and liver stones are to him sufficient presumptive evidence of the former etiology. The greater amount of the splenic involvement, according to Dufour, points to the role that circulatory infection may have played in their causation. The X-ray examination of the stones confirmed the concentric nature of the calcareous deposits.

The patient G. D. in whom likewise spleen concretions were found, was admitted to the City and County Hospital of San Francisco, complaining of a swelling and ulceration of the penis beginning 10 months previous to admission. With the exception of an attack of yellow fever 40 years previously, there is nothing in the history that may have any bearing on the splenic findings. The physical examination revealed the presence of a marked right lateral scoliosis with roughened breath sound on the left side. The abdomen was not enlarged or tender, and the spleen was not enlarged as determinable by percussion or palpation.

The penis was entirely involved by a new growth which had metastasized to the right and the left inguinal glands. The lower extremities were not edematous nor could any varicosities be demonstrated. On May 31st a complete removal of the penis with both the inguinal and the lumbar glands, was followed by an attempt at a radical cure for an existing left inguinal hernia. Previous to operation he was found to have a slight glycosuria which disappeared under dietetic treatment. The patient died on the 20th of June as the result of a secondary hemorrhage.

The findings at autopsy performed June 20th, were as follows: Aged male of much less than medium height. Status after block dissection for carcinoma of penis and removal of iliac glands. Marked emaciation present, rigor mortis absent. Post-mortem stasis present but not marked. Large undermined ulcer, about the size of a silver dollar, is present over sacro-coccygeal junction.

Large irregularly triangular wound present over pubic symphysis and adjacent bony structures. The wound is dry and the edges are undermined especially over superior and inferior aspects.

Fig. 2.

Slight marginal blackish discoloration of wound. Diaphragm extends up to the fourth rib on the right side and to the fifth rib on the left side. Appendix normal. Spleen slightly enlarged. Gall bladder fixed by numerous adhesions. Old pericholecystitis present. Both lungs collapse on opening the chest cavity. Right lung markedly adherent to the chest wall. Complete atalectasis of the posterior surface of the left lower lobe. Left lung shows slight amount of interlobar adhesions between upper and lower lobes. There is marked congestion and edema of the upper left side. Few small areas of consolidation with anthracotic induration. Emphysematous distention of the anterior margin of the left lung is marked. Slight amount of arteriosclerosis of the pulmonary artery is present. Slight amount of

bronchiectasis is likewise present. Purulent bronchitis present in the right lung with edema and slight congestion of the upper part of the lobe. The right lung is otherwise negative. Hilus glands are markedly anthracotic and slightly swollen. Pericardial cavity is smooth. Heart is slightly larger than the corresponding left fist of the individual. Consistency is very well preserved. Mitral opening admits two finger tips, tricuspid three. Right heart enlarged, the right auricle showing marked whitening of the endocardium. Slight amount of parenchymatous degeneration of the muscle substance of the heart. Marked ar-

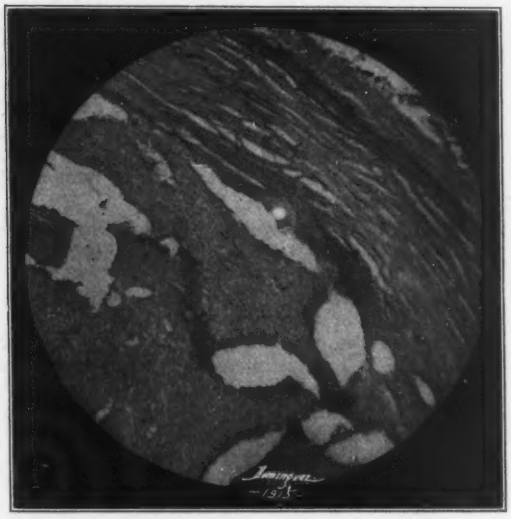

Fig. 3.

teriosclerosis of the trunk of the aorta. Fibrous thickenings of the aortic cusps with slight amount of sclerosis of the coronary arteries. The spleen findings will be discussed more fully below. Right kidney large, capsule strips readily. Pelvis smooth, cortex increased in size, markings slightly indistinct, otherwse negative. Left kidney similar to right. Stomach small and contracted. Mucosa markedly rugose and contracted. Gall passages patent. Pancreas slightly atrophic, otherwise apparently normal. Liver increased in size, and on section shows typical nutmeg appearance.

Substance of the liver is soft and friable. On dissecting the internal iliac, the vessel wall is found to contain numerous sclerotic patches. At the upper part of Scarpis triangle on the left side, the femoral vein is found eroded close to the point of anastomosis with a small branch. No glands are to be found, except a few small ones at the bifurcation of the iliacs. No evidence of carcinoma is to seen. Eroded left femoral vessel is directly above a large circular cavity with smooth walls containing lymph. Dilation of the femoral artery present directly below Poupart's Ligament.

Outside of the splenic findings the chief findings are then an extensive arteriosclerosis with evidence of previous emphysema and chronic bronchitis. There is no evidence of previous tuberculosis unless the plastic pleurisy is to be considered as such. The spleen at autopsy weighed 105 gms. was enlarged and showed a slight degree of previous perisplenitis. On section it was found necessary to saw through the spleen on account of the contained stones. The stones are diffusely distributed throughout the spleen as can be observed in Plate 1, as well as in Plate 2.

The spleen measures 7.5 cm. in length, 6.0 cm. in width and 2.0 cm. in thickness. A section through the spleen parallel to its long axis shows the spleen pulp to be fairly firm; follicular markings quite distinct; and the spleen trabeculae increased in thickness. At the hilus about the junction of the middle and lower third are several irregular noblike firm nodules which on closer examination are seen to be calcified. These yellowish white masses are sharply marked off from surrounding splenic substances. When these nodules are moved to and fro they are found to be invested by a thin greyish membranous capsule. One of these stones lies directly underneath a large branch of the splenic vein, and seems to lie in a sort of diverticulum of this vein. On microscopical examination the lymphatic corpuscles are fairly well preserved. The trabeculae are increased in thickness and the smaller penicillium glauci are the seat of marked hyaline changes. The larger blood vessels are increased in thickness, the intima and adventitia having undergone the greatest increase in fibrous elements. The pulp cells are present but are not increased in amount. The pulp contains numerous eosinophile cells as well as large mononucleated cells. There is no evidence of phagocytosis present.

The microscopical examination of a concretion and its surrounding tissue shows the area of calcification to be surrounded by a fibrous ring the interior of which is lined by hyperplastic elastic tissue. Strands of tissue are present which extend into the interior of the stone and which also are lined by elastic fibres. This is best demonstrated in sections stained with Unnas Orcein method. The presence of these strands points to a previous thrombotic process which has undergone organization, since all organizing thrombi in blood vessels are accompanied by excessive hyperplasia of the intima of the blood vessel. This is best manifested by an increase in the elastic elements of the blood vessel wall.

From the above findings it would seem that we are dealing with a case similar in some respects to the phleboliths that are occasionally encountered in the splenic vein. Owing to the interstitial splenitis present venectasis followed by thrombosis with consequent calcification has taken place in the substance of the spleen. The spleen would be subject to the same rule applicable in the case of the lung, where as a result of an interstitial pulmonitis the bronchial walls undergo an ectasis produced by the unequal distribution of the atmospheric pressure. The variations in blood pressure that the spleen is subject to, are felt chiefly in the walls of the larger blood vessels, and as can be seen from the X-ray photograph the venectasis has occurred principally in the larger branches of the splenic vein within the spleen.

Their distribution about the hilus also lends additional weight to this hypothesis. Although tuberculous changes were not demonstrable in the lung, the histology of the stones and their relationship to elastic tissue makes the supposition of a previously healed tubercle with secondary calcification, untenable. Other conditions such as calcified infarct or gumma are likewise ruled out for the same reason. We must conclude therefore that this case is one of phleboliths of the spleen and is of unusual interest because of the venectasis and the comparatively large size of the stones.

I wish to thank Dr. Sterling Bunnell for his kindness in referring the case, Dr. M. P. Burnham, roentgenologist of the St. Francis Hospital, for the Roentgenogram, and Mr. Dominguez for the microphotograph of the specimen.

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Plate 1—Photograph of Spleen Stones showing their relation to the Spleen Hilus.
Plate 2—X-ray of the Stones in Spleen taken after removal from body.
Plate 3—Section of capsule surrounding a stone.

LEUKOPENIA: ITS RELATION TO NEURALGIA.

By JOSEPH H. CATTON, M. D., San Francisco.

Neuralgia has a most varied etiology. Certain factors, for example trauma, or dental caries, may, acting purely locally, cause it. This communication considers the systemic causes of neuralgia. It shows that each of these etiologic factors tends also to bring about a relative or absolute decrease in the number of granular leukocytes, and offers the suggestion that there is a definite relation between the leukopenia and the nerve affection giving rise to neuralgia.

Etiology of Neuralgia.

INFECTIONS.

Neuralgia is a common symptom of certain infections, being most often seen in malaria, influenza and syphilis. Malaria is mentioned by all writers on neuralgia as the most frequent infectious cause. Pierre Marie says neuralgia is more common in the chronic forms of the disease. White and Jelliffe think it due to the toxemia, and Oppenheim and Mayer to the direct action of the virus. Certain of the neuralgias in this disease may be due to anemia per se.

Influenza is a well-recognized cause and is second only to malaria in the frequency of its association. Lewandowsky says that in malarial-free countries influenza is the most common cause.

Neuralgia is frequently associated with syphilis. Pierre Marie, Bing, Schmidt, Starr, Dieulafoy and others simply mention its association with the disease. Jacobsohn, Gowers, Leube and Oppenheim doubt that it is truly syphilitic, but Fournier and Obalinski claim that neuralgia is a definite symptom of the infection.

Neuralgia may occur in typhoid. Leube, Salinger and Marie find it early in the disease and the latter also during its course. Oppenheim thinks it due to toxins and to exhaustion.

Tuberculosis is sometimes etiological in neuralgia. Schmidt and Babcock mention its occurrence here and Marie writes of its presence early and in the course of the disease.

Marie reports neuralgia at the onset of the eruptive fevers; and Jelliffe, Leube, Salinger and others mention its occurrence more specifically in smallpox. Gonorrhea was recorded as a cause of neuralgia by Marie and Schmidt. Jelliffe says it may occur in tonsillitis.

THE ANEMIAS.

The association of neuralgia with anemia is well recognized. Marie finds anemia per se, etiological of neuralgia. Jelliffe speaks of the affection in post-hemorrhagic and parasitic anemias, and Thompson in the anemias of such intoxications as those of benzene, and illuminating gas. It is common in chlorosis, in pernicious anemia and the leukemias. Cabot speaks of it in hemophilia and in polycythemia.

EXOGENOUS NON-INFECTIOUS POISONS.

Poisoning with lead, arsenic, mercury or copper may be accompanied by neuralgia. Although Leube and Salinger doubt that alcohol is a true factor in its causation, there is no doubt that the affection is frequently associated with alcoholic intoxication, and the latter is regarded as a definite cause by Gowers, Bing, Schmidt and others. Neuralgias have been reported frequently in nicotine poisoning. Salinger mentions iodine as a cause. The affection may be an abstinence symptom in morphinism or cocainism.

Leukocyte Pictures.

The leukocyte pictures in the conditions just listed as causative of neuralgia will now be considered, showing the tendency toward reduction in the number of granular leukocytes or increase in the number of hyaline ones.

It was shown in a previous communication [1] that in malaria (a) there is no leukocytosis, (b) a leukopenia is practically constant, (c) the decrease in the number of cells affects more particularly the polynuclear variety, and (d) that there tends to be a relative or absolute increase in the number of large mononuclear cells.

Likewise it was mentioned that an uncomplicated influenza is associated with a leukopenia or an absence of leukocytosis and that any decrease in the number of granular cells tends to be associated with an increase in the number of hyaline ones.

A leukocytosis does not occur in uncomplicated syphilis and a relative increase in lymphocytes is more or less constant in the various forms of disease. It is established that in enteric fever (a) a leukocytosis is wanting, (b) there is in nearly all cases a leukopenia and (c) a relative lymphocytosis is a characteristic feature. Leukopenia or at least an absence of leukocytosis is the rule in tuberculosis. Certain authors except the meningeal and serosal forms. A relative lymphocytosis is more or less characteristic of the various forms of the disease. Although certain observers have reported a polynuclear leukocytosis in smallpox it was shown in a previous communication [1] that (a) the number of leukocytes may be normal (b) violent and hemorrhagic cases may present a leukopenia, (c) mild cases sometimes present subnormal counts and (d) the increase in cells at postulation is due to lymphocytes.

Gonorrhea may cause a polynuclear leukocytosis. Schmidt and Marie report neuralgia as occurring in gonorrhea. The fact that this disease is not mentioned as an etiological factor by Pearce, White, Jelliffe, Gowers, Starr, Mayer, Oppenheim, Bing and others may justify the opinion that other etiology for the neuralgia might have been found in the cases reported.

Tonsillitis with cervical gland involvement may give a lymphocytic leukocytosis. Stitt says that enlargement of the tonsils alone may give a leukocytosis of 10,000 to 15,000, 50% of the cells being lymphocytes. It will be interesting to note whether or no it is in these types of tonsillar affection that neuralgia occurs.

Most anemias are accompanied by a leukopenia. Wilson reports it in profound symptomatic anemias: it occurs in certain of the purpuras: Buchanan finds it in the severe anemias associated with gastro-intestinal disturbances in children. Leukopenia is characteristic of splenic anemia, Gulland and

1. Catton. Leukopenia, Its Relation to Orchitis. Cal. State. Jour. Medicine, Feb., 1916.

Goodal finding total counts usually below 5000 per cmm. Wright says a leukopenia is characteristic of hemophilia. It is practically constant in pernicious anemia and most frequent in chlorosis. In these diseases, in addition to the absolute reduction in the number of granular cells there is usually a relative lymphocytosis: thus, Emerson, Wood, Buchanan and Ewing find the latter characteristic of pernicious anemia, and Adami and others of chlorosis. Buchanan, Ewing and others find the lymphocytic increase in parasitic anemias, Emerson and Ewing in hemophilia and in scurvy. Lymphatic leukemia shows the greatest increase in lymphocytes and relative decrease in granular cells. Polycythemia was also listed as a cause of neuralgia. Cabot suggests that the congestion accompanying the disease may cause the neuralgia. There are abundant reports of either a leukocytosis or a leukopenia in this disease. Weber, Aldrich, Crummins and others have found leukopenia characteristic. One reason for variation in the findings is the occurrence of hemorrhage in the disease. A later communication will suggest that leukopenia is just as definitely a sign, in certain cases, of a tendency toward hemorrhage, as is leukocytosis that hemorrhage has occurred.

The leukocyte pictures in the non-infectious intoxications have not been so thoroughly studied. Thompson and others find a leukocytosis and not a leukopenia characteristic of lead poisoning, but Emerson says that chronic intoxication with lead, or with arsenic or mercury reduces the total number of white cells. Chronic alcoholism likewise may cause a leukopenia. Insufficient data was available regarding the leukocyte pictures in poisoning with benzene, illuminating gas and hydrogen sulphide; Thompson, however, finds the neuralgias of the latter associated with anemia and it was shown above that a leukopenia tends to accompany an anemia. Gulland and Goodal say that iodine injections cause an increase in the number of lymphocytes and Landis finds an increase in the hyaline cells on the third day following its administration intravenously, subcutaneously, by inhalation or inunction. The blood pictures in nicotine and cocaine intoxication need investigation. Neuralgia has been called an abstinence symptom in morphinism; Emerson finds a leukopenia characteristic of the latter condition.

This paper has considered only infectious and non-infectious exogenous toxins, and the dyscrasic toxins present in the anemias as causative of neuralgia and leukopenia. Neuralgia accompanies certain disturbances in the ductless glands, being seen more especially in myxedema: Lewandowsky speaks of it in Basedow's Disease. It is significant that a lymphocytosis is found associated with exophthalmic goiter and thyroid enlargement, that it may occur during thyroid treatment; also that Borchardt finds a leukopenia in about half the cases of thyroid disturbance.

Prolonged exposure to cold may be productive of either neuralgia or leukopenia. Certain emotions may be provocative of a neuralgic attack and emotions definitely affect the autonomic nervous system, irritation of the vagotonic side of which may cause a lymphocytosis.

Adami, Emerson, Buchanan and others state that debility from any cause may bring about an increase in the number of lymphocytes, and Wilson, Emerson and Buchanan that malnutrition regardless of cause tends to produce a leukopenia: neuralgia is a frequent associate of either debility or malnutrition.

The neuralgias in diabetes, gout, nephritis and chronic rheumatism may in some measure be due to debility and faulty nutrition.

SUMMARY.

(1) Neuralgia may occur:

a. In exogenous infectious intoxications: malaria, influenza, syphilis, and less frequently typhoid, tuberculosis, smallpox and tonsillitis.

b. Exogenous non-infectious intoxications: poisoning with lead, arsenic, mercury, copper, nicotine, hydrogen sulphide, illuminating gas, benzene and iodine; or as an abstinence symptom in morphinism and cocainism.

c. Dyscrasic intoxication in blood disease: the severe anemias, pernicious anemia, chlorosis, leukemias, hemophilia and polycythemia.

d. Following exposure to cold.

e. In certain ductless gland disturbances.

f. In debility and malnutrition.

(2) A relative or absolute reduction in the number of granular leukocytes tends to be characteristic of each of the above conditions.[2]

CONCLUSION.

After a study of the conditions etiological in neuralgia and of the leukocyte pictures present in these conditions, the suggestion is offered that there is a definite relation between neuralgia on the one hand and a disturbance in the normal polynuclear-lymphocyte balance,—a tendency toward decrease in the number of granular cells and increase in the number of hyaline ones.

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Provisional Program

FIRST DAY.

California State Medical Society, April 18, 19, 20, 1916.

As the program is crowded, the papers will be limited absolutely to the time specified, otherwise there will be no time left for discussions. Discussions are limited to five minutes for each member taking part.

Tuesday Morning.

General Session, etc. (The Report on Medical Education and Medical Licensure, **will be presented for general discussion.)**

Tuesday Afternoon.

1. Symposium on "Exophthalmic Goitre."
   (a) "Unusual Aspects of Exophthalmic Goitre" (10 minutes).
   George D. Barnett, San Francisco.
   (b) "Symptomatology" (10 minutes).
   Henry Lissner, Los Angeles.
   (c) "Surgery of Exophthalmic Goitre" (10 minutes).
   E. C. Moore, Los Angeles.
   Discussion opened by Wallace I. Terry (San Francisco).
   (d) "Medical Treatment of Exophthalmic Goitre (10 minutes).
   Donald Frick, Los Angeles.
2. "The Gait in Nervous Diseases." (Illustrated by Motion Pictures.) (15 minutes.)
   Walter Schaller, San Francisco.

SECOND DAY.

Wednesday Morning.

1. "Symptomatology of Gall Stones With Normal Findings at Operation" (15 minutes).
   Harold Brunn, San Francisco.
   Discussion opened by Alanson Weeks (San Francisco).
2. "Selected Points in Gastrointestinal Diagnosis." (Lantern Slides.) (15 minutes.)
   G. W. Lippman, San Francisco.
   Discussion to be opened by Rexwald Brown (Santa Barbara).
3. "Relation of Posture to Physical Efficiency" (15 minutes).
   H. L. Langnecker, San Francisco.
   Discussion to be opened by Leonard W. Ely and J. T. Watkins, San Francisco.
4. "Operative Treatment of Procidentia" (15 minutes). F. W. Lynch, San Francisco.
   Discussion to be opened by A. B. Spalding and C. J. Teass, San Francisco.
5. "American Red Cross Work in Belgrade" (20 minutes).
   Shadworth Beasley, San Francisco.
   Discussion to be opened by H. A. Rosenkranz, Los Angeles.

Wednesday Afternoon.

Sessions of G. U. and Eye, Ear, Nose and Throat, and the Tuberculosis Society.

THIRD DAY.

Thursday Morning.

1. "Occurrence of Double Tumors" (10 minutes).
   James Blair, San Jose.
2. "Apocodeine—A New Laxative With Particular Advantages" (10 minutes).
   W. C. Alvarez, San Francisco.
3. "Trifacial Neuralgia" (10 minutes).
   J. M. Wolfsohn, San Francisco.
4. "Blood Sugar Tolerance" (10 minutes).
   R. S. Cummings and George Piness, Los Angeles.
5. "Treatment of Syphilis" (20 minutes).
   Granville MacGowan, Los Angeles.
6. "Mercurialized Serum Injections in Syphilitic Nervous Diseases" (10 minutes).
   Henry Mehrtens, San Francisco.

Thursday Afternoon.

1. "Leucopenia—Its Significance."
   Joseph H. Catton, San Francisco.
2. "Symposium on **"Focal Infections."**
   (a) "Focal Infections in General" (10 minutes).
   J. A. Colliver, Los Angeles.
   (b) "Endocarditis in Childhood" (10 minutes).
   E. C. Fleischner, San Francisco.
   (c) "Intestinal Involvement" (10 minutes).
   Fred Gundrum, Sacramento.
   (d) "Focal Infection from a Urological Standpoint" (10 minutes).
   Ralph Williams, Los Angeles.
   (e) "Mouth" (10 minutes).
   James G. Sharp, San Francisco.
   (f) "Tonsils" (10 minutes).
   John Mackenzie Brown, Los Angeles.

GENITO-URINARY SECTION OF THE STATE MEDICAL SOCIETY AND WESTERN BRANCH OF THE AMERICAN UROLOGICAL ASSOCIATION.

Wednesday Morning—10 A. M.

Fibrosis of the Bladder Neck as a Cause of Urinary Frequency. H. Welland Howard.

Urethral Fistulae. Charles D. Lockwood.

A Report of Fifty Cases of Tuberculosis of the Kidney and Bladder Clinically Cured Without Operation. F. S. Dillingham.

Lantern Slide Demonstration of the Use of the X-ray in the Diagnosis of Kidney and Ureteral Diseases. Frank Hinman.

Radiographic Diagnosis of Hydronephrosis with Lantern Slide Demonstrations. Martin Krotoszyner.

GENERAL SESSION.

Wednesday Afternoon—1:30 P. M.

Symposium on Tumors of the Kidney:

By Albert Soiland, J. Shearman Peterkin. Discussion opened by Leon J. Roth.

By Langley Porter. Discussion opened by P. V. K. Johnson.

By Herbert C. Moffitt. Discussion opened by Jos. M. King.

By Stanley Stillman. Discussion opened by Guy Cochran.

Modern Diagnosis and Treatment of Urinary Lithiasis. William E. Stevens.

Thursday Morning—10 A. M.

A Preliminary Report on the Simultaneous Use of Indigo Carmine and Phenolsulphonephthalein Tests in Surgical Diseases of the Kidney. Anders Peterson.

The Diagnosis and Treatment of Contracture of the Vesical Neck. Arthur B. Cecil.

The Value of Fuchsin in Urology. Victor G. Vecki.

A Method of Re-establishing the Patency of the Ureter in Pyonephrosis. M. Molony.

TENTATIVE PROGRAM OF EYE, EAR, NOSE AND THROAT SECTION.

"Results of the Intracapsular Cataract Operation After One Year." Dr. A. S. Green, San Francisco. Discussion opened by Dr. Hugo A. Kiefer, Los Angeles.

"Eye Symptoms of Tabes." Dr. Wm. F. Blake, San Francisco. Discussion opened by Dr. M. W. Fredrick, San Francisco.

"Additional Notes on the Etiology of Oezena." Dr. Henry Horn, San Francisco. Discussion opened by Dr. E. A. Victors, San Francisco.

"The Surgical Treatment of Squint." Dr. Vard H. Hulen, San Francisco. Discussion opened by Dr. Thos. J. McCoy, Los Angeles.

"The Removal of Foreign Bodies From the Bronchi and Oesophagus." Dr. H. B. Graham, San Francisco. Discussion opened by Dr. Geo. W. McCoy, Los Angeles.

"Present Legislation and Proposed Legislation for the Prevention of Blindness." Dr. Edw. F. Glaser, San Francisco. Discussion opened by Dr. Wm. Ellery Briggs, Sacramento.

"Report of Interesting Cases." Dr. Cullen F. Welty, San Francisco. Discussion opened by Dr. Benj. F. Church, Redlands.

"Glaucoma, a Critical Review of Present Methods of Treatment." Dr. Hans Barkan, San Francisco. Discussion opened by Dr. W. Scott Franklin, San Francisco.

"Meningitis of Nasal Origin." Dr. Havard Y. McNaught, San Francisco. Discussion opened by Dr. P. A. Jordan, San Jose.

"Meningitis of Otitic Origin." Dr. E. C. Sewall, San Francisco. Discussion opened by Dr. J. Mackenzie Brown, Los Angeles.

"Tubercular Meningitis." Dr. Wm. B. Lucas, San Francisco. Discussion opened by Dr. H. S. Moore, San Francisco.

"Eye Findings in Meningitis." Dr. W. Scott Franklin, San Francisco.

"Prospects of Surgical Treatment of Meningitis." Dr. H. C. Naffziger, San Francisco. Discussion opened by Dr. S. Hyman, San Francisco.

"Focal Infections and the Eye." Dr. H. G. Thomas, Oakland. Discussion opened by Dr. Hans Barkan, San Francisco.

"Strabismus, Latent and Manifest." Dr. Roderick O'Connor, Oakland. Discussion opened by Dr. E. W. Alexander, San Francisco.

"Some Conditions of the Eyes and Throat Which Retard the Progress of School Children." Dr. W. S. Fowler, Bakersfield. Discussion opened by Dr. Barton J. Powell, Stockton.

"Pure Carbolic Treatment of Selected Cases of Chronic Suppurative Aural Inflammation." Dr. G. W. Walker, Stockton. Discussion opened by Dr. Dwight H. Trowbridge, Fresno.

"The Bacteriology of Sinus Disease." Dr. John J. Kyle, Los Angeles. Discussion opened by Dr. Adolph B. Baer, San Francisco.

"The Sluder Method of Tonsillectomy." Dr. F. M. Shook, Oakland.

"Prescribing Frames and Lenses." Dr. Percival Dollman, San Francisco.

"The Modern Treatment of Iritis." Dr. M. W. Frederick, San Francisco. Discussion opened by Dr. Alex. Galbraith, Oakland.

DR. KASPAR PISCHEL,
Chairman.
DR. GEO. P. WINTERMUTE,
Secretary.

"Readers of Papers—Important Notice."

The Program has been full for some weeks. Numerous excellent papers have had to be refused places on account of lack of room. If any of the authors who have been placed on the Program, by invitation or otherwise, find that they cannot appear, the Committee would greatly appreciate prompt notification to that effect. It is only in this way that provision can be made for those whose requests came in too late.

Those readers who will require a stereopticon or other apparatus **are again urgently requested** to notify Doctor Jones or the Committee on Arrangements.

THE AMERICAN MEDICAL GOLFING ASSOCIATION.

In accordance with preliminary announcement made in the A. M. A. Journal previous to the last A. M. A. convention, the American Medical Golfing Association held its first tournament in San Francisco, June 21, 1915. Arrangements were then made for the organization and that is now complete with the following directors:

President....Wendell C. Phillips, New York
Vice-President....James Eaves, San Francisco
Secretary-Treasurer....Will Walter, Chicago

Plans are now being made for the second tournament to be held in Detroit at the forthcoming A. M. A. convention in June.

The directors have decided to list as charter members all fellows who shall have enrolled by April 1, 1916.

All fellows of the A. M. A. who play the game are eligible and may obtain the desired information from the Secretary-Treasurer, Dr. Will Walter, 122 S. Michigan Boulevard, Chicago.

Members of the British Medical Association have a similar organization for play at their annual meetings, and it is thought that this will add materially to the social interest of the A. M. A. as it has to the B. M. A. conventions.

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Published by the

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THE TYPHOID FEVER DEATH RATE IN CALIFORNIA.*

By WILBUR A. SAWYER, M. D.,
Secretary, California State Board of Health.

The typhoid fever death rate in California has been falling steadily since the year 1906, when authoritative statistics were first collected. Nevertheless, typhoid fever is still all too prevalent, and the State Board of Health is determined to bring about further marked reductions in the amount of this disease.

The typhoid death rate, expressed in the number of deaths per 100,000 of population is, at the present time in California, the only practical measure by which success in attempts to reduce typhoid fever can be gaged. The case rate, or morbidity rate, would be a better indicator of the success of preventive measures if it could be accurately ascertained. Too many cases of typhoid fever, however, go entirely unreported to make the morbidity rate a true picture of the condition with regard to typhoid fever in the state.

This incompleteness in the reporting of cases can be readily demonstrated. The number of deaths from typhoid fever, considering all cases, is decidedly less than ten per cent. of the number of cases, probably about five per cent. I believe, therefore, that I am conservative in estimating that for every death from typhoid fever in California there are nine cases which could be easily recognized and which terminate in recovery. On this basis there should be ten times as many cases of typhoid fever as deaths, granting that the reports of death are fairly reliable, which I believe they are. In the year 1914 there were 376 deaths from typhoid fever reported. This would indicate the existence of at least 3760 cases. In that year reports were received of only 1810 cases, 48 per cent. of the estimated number. To put the matter more strikingly, the records would appear to show that 20.8 per cent. of all cases of typhoid fever in California died—a ridiculous result! Further analysis of the records will show that this ratio between cases actually reported and cases estimated from the death rate varies greatly under the jurisdiction of different health departments. The following table shows the number of deaths per one hundred reported cases, for cities of over 25,000 population and a few counties having a high typhoid rate. The apparent case mortality is also shown:

TYPHOID FEVER—1914.

Cities with estimated populations of 25,000 and over	No. of Deaths	No. of Cases	Deaths per 100 reported Cases	Cases reported. Per cent. of the estimated number of cases
Alameda	2	19	10.5	95
Berkeley	4	27	14.8	67
Fresno	5	11	45.4	22
Long Beach	3	20	15.0	67
Los Angeles	33	256	12.9	78
Oakland	13	86	15.1	66
Pasadena	3	7	42.8	23
Sacramento	23	260	8.8	113
San Diego	10	11	90.9	11
San Francisco	57	274	20.8	48
San Jose	3	4	75.0	13
Stockton	12	14	85.7	11
COUNTIES:				
Amador	3	22	13.6	73
Butte	4	7	57.1	17
Colusa	6	16	37.5	27
Contra Costa	9	24	37.5	27
Fresno	14	27	51.8	19
Imperial	17	45	37.7	26
Kern	7	11	63.6	16
Kings	4	90	4.4*	225
Orange	13	35	37.1	26
Riverside	6	29	20.6	48
Santa Clara	11	24	45.8	22
Shasta	2	6	33.3	30
Siskiyou	3	7	42.8	23
Solano	3	12	25.0	40
Sonoma	10	108	9.2*	108
Stanislaus	4	11	36.4	27
Tehama	4	14	28.6	35
Tulare	5	23	21.7	46
Yolo	7	20	35.0	29

It is obvious, then, that, for the present, the only reliable index of progress in typhoid prevention is the typhoid death rate. In California the rate per 100,000 population is obtainable for the past eight years and shows a steady fall from 32.2 to 13.6, a reduction of 58 per cent. Nevertheless, there is still much room for improvement. As the rate becomes smaller, the difficulty of further reduction will become greater, but California is better prepared to prevent typhoid fever now than ever before.

In a comparison of the amount of typhoid fever in the various states, California holds a middle place. The latest complete official statistics are those published for the year 1913 by the United States Bureau of the Census. In that year, twelve states of the registration area had a worse rate than California and eleven made a better showing. The highest rate was 57.4 (North Carolina) and the lowest was 7.8 (Vermont). Five states had typhoid death rates below 10 per 100,000: Vermont, 7.8; Massachusetts, 7.9; Rhode Island, 8.3; Wisconsin, 9.0, and New Jersey, 9.6. Every effort will be made to bring California into this group within the next four years.

Within the state the prevalence of typhoid fever is far from uniform. In the counties bordering on the sea coast there is, in general, less typhoid fever than in those in the interior. The typhoid fever rates by counties for the years 1909 to 1914, inclusive, were compiled by Mr. Guy P. Jones and published in the monthly bulletin of the California State Board of Health for April, 1915. He showed that the rates for the various counties varied from zero to 64.7 and that the highest

* Read before the Northern District Medical Society, Sacramento, November 9, 1915.

* Nearly all cases reported because of the presence of an epidemic.

rates were in the interior counties. The most alarming rates were in large part due to the use, for drinking purposes, of water from polluted streams, ditches, or wells.

In comparing the typhoid rates of our cities and our counties it must not be overlooked that one region may receive credit, or rather discredit, for cases imported, after infection in another place. It is customary for health officers of cities, in discussing the typhoid fever death rate within the areas of their jurisdiction, to state the true death rate and then to make reduction on the basis of imported cases. Sometimes the imported cases comprise a very large part of all the cases in a city. The process of excluding the imported cases from consideration must, to give correct results, be supplemented by the addition of cases infected within the city, but exported to other communities.

Another source of error in the comparison of communities lies in the fact that the counties are subdivisions too large for consideration as units, if the statistics regarding typhoid fever are to indicate the most important sources of infection. A county may contain a circumscribed area in which the danger from infection is very great, but the average death rate for the county may, nevertheless, be low.

It is desirable to make available all the statistics that can be obtained which will be useful to state and local health officers in the control of typhoid fever. To this end it is proposed to require more definite statistics regarding the origin of each case of typhoid fever and to distribute the information thus obtained, through the State Board of Health as a central office. For instance, if a city declares that certain cases are imported and should not be credited to that city, it will be incumbent upon the health officer to furnish the State Board of Health with a statement regarding the probable origin of each case. The State Board of Health, thereupon, will take the matter up with the health officer in the region which is the alleged source of infection and will request an investigation and a report. From all the information so obtained, it will usually be possible to decide where infection really took place.

In this way a corrected death rate for the state, by localities in which infection took place, can be arrived at, and attention will be called to local conditions which are responsible for keeping up our death rate. As soon as a given town or farm, or other subdivision of the state, is found to be a focus from which typhoid fever is being distributed, intensive preventive measures can be instituted there.

It is my intention to inaugurate this system so that it will be in full working order by the first of the coming year. Then it will be possible in the year 1916 to show definitely where most of our typhoid fever is coming from and to use the epidemiologists and engineers of the Board more effectively in attacking the disease at its source. At the end of the year we shall be able to supply a corrected, as well as an actual death rate, for various parts of the state and to construct a map showing accurately the areas of greatest prevalence.

The State Board of Health is carrying on an intensive campaign for the reduction of the typhoid rate. It is determined to reduce this rate from 13.6 to 9.6 in the four years from 1915 to 1918, inclusive. Present indications are that the reduction aimed at will be accomplished for this year. But, as the rate falls toward zero, the reduction will become more difficult, especially, if neighboring states permit a higher rate to exist. To announce a determination to attain a rate as low as 9.6 in four years seems daring, but the Board is confident of success, as it is in a position now to enforce stream pollution laws, and exercise supervision over sewage disposal and water supplies much more effectively than in the past.

The newly created Bureau of Sanitary Engineering is already actively engaged in making inspections and laying down the conditions upon which permits will be issued for the disposal of sewage or the selling of water for domestic purposes. This one activity, newly inaugurated, will, we hope, be very effective in the reduction of the typhoid rate.

In this campaign for the reduction of the typhoid fever rate, the sanitation of summer resorts and smaller rural communities, will be dealt with by the Sanitary Inspector of the State Board of Health. This inspector places emphasis particularly upon proper sewage disposal. Through his activities, conditions have already been greatly improved in many of our summer resorts. Shortly we expect to note a decided diminution in the so-called "Vacation Typhoid." The Board of Health intends to make the great parks and playgrounds of this state safe. Streams used for drinking purposes will be protected and those which cannot be kept unpolluted will be placarded, if they are in such a situation as to be convenient sources for drinking water.

The Bureau of Communicable Diseases, heretofore known as the Bureau of the Hygienic Laboratory, will play its important part in this reduction of typhoid fever. The epidemiologists and bacteriologists of that Bureau can carry on intensive investigations in those areas in which typhoid fever is prevalent, and ferret out the typhoid fever of obscure origin. It is this Bureau that will detect the more dangerous typhoid carriers and make it possible to place them under proper protection and isolation. It is this Bureau of Communicable Diseases that will help, further, by making such Widal tests and bacteriological examinations, as may be needed by the smaller communities and rural districts of the State to confirm the diagnosis of typhoid fever. It is this Bureau which assists materially in the reduction of typhoid fever by the manufacture and distribution of antityphoid vaccine, free, to physicians. I feel that the very decisive reduction in the typhoid rate in the year 1914, was, in part, at least, due to the extensive use of anti-typhoid vaccine, especially, in the immunization of nurses and persons in contact with the sick.

The individual physician and the local health officer will have to take a very important part in

this campaign. In the first place we must depend upon them for the complete reporting of all cases as well as deaths. I have already shown how incomplete the morbidity reports are, except in the presence of epidemics under investigation. If typhoid outbreaks are to be controlled at their beginning, it is necessary that information should be received regarding every case as soon as a diagnosis can be established. Investigation can then follow promptly. Great assistance can be rendered if the physician and local health officer will make vigorous attempts to locate the source of the infection and to give such instructions and to take such action as may be necessary to hold the disease in check until steps for permanent correction can be taken. In every case of typhoid fever inquiry should be made regarding the location of the patient at the probable time of infection, the drinking water supply and milk supply, and contacts with previous cases. These data should be forwarded to the local health officers, who, in turn, will keep the State Board of Health informed.

One very important part in the prevention of typhoid fever is almost entirely in the hands of the individual physician. He must see that proper bedside precautions are instituted to prevent the spread of typhoid fever within the household of the patient. Infection of the families of typhoid patients, and especially of those persons who care for the sick, have been common in California. Trained nurses have frequently been infected, and physicians should make it a rule never to place a nurse in charge of a case of typhoid fever unless she has been immunized. Those nurses who have not had the disease should be vaccinated against it.

Most important of all, physicians should see that the patient is properly isolated and that there are provisions in the sick room for proper washing of the hands of the attendant and of the physician. While investigating epidemics, I have frequently found that it was necessary to go to the kitchen sink to wash, after examining a typhoid patient.

As far as possible all typhoid fever cases should be cared for in hospitals or have the attention of trained nurses. If physicians will explain to families the risk of having the patient cared for by the same person who prepares the food for the family and waits on the children, more cases will go to the hospitals and more will be attended by nurses trained in the prevention of infection.

A circular containing the rules of the State Board of Health regarding the prevention of typhoid fever will be sent to any applicant on request.

If the plan of the State Board of Health for reducing the death rate to 9.6 per 100,000 population in four years is accomplished, it will mean the preventing of three hundred deaths from typhoid fever and over three thousand cases. This, however, is not the only reward. Hazen has estimated that, after water purification, for every reduction in the number of deaths from typhoid fever a certain number of other deaths have been avoided, probably two or three.

It is probable, therefore, that if sanitation in California is improved to such a point that a typhoid death rate as low as 9.6 is possible, the saving in disease and death will be several times as great as will be shown by the statistics for typhoid fever. The results certainly will more than justify the effort and the expense.

Note: Subsequent to the reading of this paper, the California mortality statistics for the latter part of 1915 have been collected, and their tabulation has been almost completed. It is now certain that the typhoid death rate per 100,000 population for 1915 lies between 9.6 and 9.8. The rate has fallen 29 per cent. in the past year and 70 per cent. in the last nine years. This improvement was beyond all expectations, and by 1918 the typhoid death rate in California should be as low as that of any other state.

ORAL HYGIENE—THE CARE OF THE MOUTH DURING ILLNESS.

By JOHN SAYRE MARSHALL, M. D., Sc. D.,
Captain U. S. Army, Retired.

Mr. President, Members of the Alameda County District Dental Society, Ladies and Honored Guests:

In casting about for a subject upon which to address you this evening, this thought occurred to me to ask, "What prophylactic care is usually given to the mouth and teeth of those persons who are seriously ill, in our homes and hospitals?" And I was forced to answer—practically none. And yet it is during these periods that much of the damage, sometimes irreparable, is done to the teeth and oral tissues. This is a much-neglected department of prophylaxis and for that reason I have chosen to speak upon it this evening.

THE CARE OF THE HUMAN MOUTH DURING ILLNESS.

At no time in the history of the individual is the proper hygienic care of the mouth of so much importance as when suffering from severe and prolonged illness; especially the continued and intermittent fevers, tuberculosis, acute articular rheumatism, nervous prostration, and during pregnancy and lactation.

During these periods there is always a marked change in the character of the oral secretions; instead of being neutral in re-action, they are almost invariably acid; while the patient will often complain of a "bad taste in the mouth." These conditions are due to perverted nutrition, faulty metabolism and the action of the mouth bacteria in an unclean mouth.

Your essayist is fully aware, however, that in the light of recent research in relation to the influences of the internal secretions upon special and general bodily functions; that we may have, if these laboratory findings are substantiated, to modify our theories as to the causes of perverted nutrition, faulty metabolism and abnormal secretions. Discoveries have recently been made, in relation to "susceptibility and immunity to dental caries," which also, if substantiated by other research workers, will greatly modify, if not completely change our present views in relation to these conditions. There has not been during the last half of a century so much of the spirit of "I want to know" as at the present time. The profession is beginning to question, and that right seriously,

many of the supposed "thoroughly established theories" in relation to dental diseases and their etiology, and they are not satisfied with any man's *ipse dixit;* they demand the proof.

Rapid dental decay, gingivitis—inflammation of the gums—and stomatitis are common complications, or rather sequelae of severe illness.

Rapid dental decay is almost always a concomitant affection of typhoid fever and rheumatic fever. The same condition is also very frequently associated with pregnancy and lactation. These facts are well known to dental surgeons, and many cases might be cited to substantiate the statement.

By way of illustration, the writer will briefly describe three typical cases from his own practice, which occurred several years ago.

Mr. J. K., aged 19 years, in the finest of health, had his teeth put in the best of condition before entering college. He had had but little dental decay; always, from a little child, had taken nice care of his teeth and mouth. He was considered by the writer as one of his banner patients. Two months after entering college, he was stricken with typhoid fever in a severe form. Three months later returned to his home to convalesce and at once reported, complaining of sensitiveness of the teeth and of decay. Upon a critical examination fourteen cavities of decay were found, located at the gum margins and upon the approximal surfaces.

Miss E. L., aged 14 years, of robust health, had beautiful and almost perfect teeth, with very few fillings. Mouth carefully examined just before sailing for Paris to enter a fashionable school. Six months later was stricken with inflammatory rheumatism, and for several weeks her life hung in the balance. Upon recovery, she visited a noted Paris dentist for relief of very severe pain and decay at the gum margins of nearly all of her teeth. Only temporary treatment was given her at this time, as her parents were to bring her home as soon as strong enough to make the ocean voyage. She, however, suffered a relapse and died in Paris.

Miss H. C., aged 25 years. Milliner by occupation; health had been good. Teeth were in good condition and regularly cared for. Had a number of fillings, all in good condition at last visit. Soon after, was stricken with pneumonia, was desperately ill and made a slow recovery. Acute pulmonary tuberculosis developed before she was able to leave her room, from which she died six months later. During the last four months of her illness her teeth were attacked with rapid decay, which affected nearly every metal filling in her mouth and established several new cavities, necessitating many visits to her bedside to give her relief from pain.

In all of these affections and conditions the salivary secretions are hyper-acid, and as a result of this the teeth are particularly prone to rapid dental decay. The same is true of children suffering from severe and prolonged cases of scarlet fever, diphtheria, measles and gastro-intestinal affections. The writer also observed while on duty in the Philippine Islands that our soldiers afflicted with amebic dysentery and sprue were very prone to rapid dental decay. Pyorrhea alveolaris, however, was no more prevalent in these cases than in other forms of severe illness.

The signs of rapid dental decay are a whitening of the enamel at the cervices (necks) of the teeth at the gum margins, giving a chalky appearance to this portion of the teeth. A whitened, or chalky zone around present cavities of decay that have been filled with gold and other metals, and the formation of chalky-appearing zones upon the approximating surfaces of the teeth at the points of lateral contact. I have never seen this occurring where gutta-percha had been used as a filling.

Gingivitis, or inflammation of the gums, is usually due either to an unclean condition of the mouth, causing an infection, or to the presence of salivary calculus (tartar), or to a faulty metabolism.

Stomatitis, or inflammation of the mouth, is generally due either to infection from an unclean condition of the mouth, to local irritation from substances taken into the mouth as food or remedies, or to the systemic action of drugs such as mercury, iodin, and the mineral acids which have been exhibited for special purposes.

The care of the mouth of the invalid is a subject of great importance from both the hygienic and curative standpoints.

Prophylaxis. The first consideration in prophylaxis, or prevention, is cleanliness. This applies with equal force to medicine, surgery and sanitation. It is the sheet anchor of success in all of these departments of science.

The oral hygienist must, therefore, base his expectations for success upon cleanliness of the mouth, first, last, and all of the time.

The physician insists upon the daily bath of all his patients, in a manner suited, of course, to each particular case. The surgeon not only requires this, but insists that the part to be operated upon shall be rendered surgically clean, germ-free, which is a much more exacting proposition than ordinary cleanliness.

The dentist also requires that the tooth upon which he operates shall be surgically clean, and this he accomplishes by isolating the tooth with sterilized rubber dam, and treating the tooth with antiseptics.

The oral hygienist cannot, however, carry his efforts in cleanliness to the extremes required by the surgeon and the dentist; neither is it necessary in order to accomplish the success for which he is striving.

The fact remains that in a mouth which is free from food debris, accumulations of salivary calculus, decayed teeth or diseases producing suppurative products, the fluids of the mouth have no autoinfective properties. In other words, the secretions of a clean, healthful mouth are physiologic products, although they may contain several species of mouth organisms, and be infective to another individual. Wounds, even of an extensive character, made in a clean mouth almost invariably heal without inflammation or other untoward accompaniment.

In the case of the mouth of the invalid who has been accustomed, previous to the present illness, to give proper attention to the cleanliness of the mouth and to dental treatment, there are no difficulties that may not be overcome with tact and patience. In even the most desperate cases, where the temperature is running high, and the mouth, tongue and lips are dry and parched, a gentle

cleansing of the mouth is most soothing and grateful to the patient, and eagerly sought thereafter. Instead of being disturbing and harmful to the invalid, it proves restful, as is often shown by being followed by refreshing sleep. It is not always possible to employ the toothbrush and water for cleansing the mouth, as the patient may be too weak to sit up, or even to turn over on the side to eject the water from the mouth. Under these circumstances the mouth may be effectively cleaned by first wiping the teeth with a piece of sterile gauze, wrapped upon the first finger of the right hand, or upon an orange-wood stick (the finger being preferable for many reasons which are obvious), moistened in a saturated solution of boric acid. Then, with the orange-wood stick, flattened at one end, and wrapped with a few fibers of sterilized cotton, carefully rub the surfaces of all the teeth with a 25 per cent. solution of hydrogen peroxide, completing the cleaning of one tooth at a time. The foam which is caused by the effervescence of the hydrogen peroxide in contact with the fluids of the mouth may be wiped away with pieces of gauze moistened in orange water. This cleansing will usually prove so grateful and refreshing to the invalids that they will look forward to it with pleasurable anticipation.

The cleaning of the tongue in illness is especially important when it is covered with a thick, heavy deposit,—"fur," the result of rapid and undisturbed growth of micro-organisms. In these cases the tongue-scraper will be an invaluable aid to a proper cleaning of this organ. The tongue should afterward be carefully wiped with a piece of sterilized gauze moistened with a saturated solution of boric acid, for its cleansing effect.

The cleansing of the tongue, aside from its prophylactic value, is a matter of great comfort to a patient who is running a high temperature, and should never be neglected when it is possible to accomplish it without too much disturbance of the patient.

On the other hand, with a patient who has never given any particular attention to the cleanliness of the mouth or to dental treatment, in which salivary calculus is present in considerable amount, dental decay rampant, several teeth with discharging abscesses, or suppurating sockets from pyorrhea alveolaris (Riggs disease), many difficulties are presented; difficulties which cannot be overcome except by a dentist or a dental nurse trained for this particular service. There is great need in all of our hospitals and sanitariums for nurses of this character. Genteel young women who have received special training to fit them to take charge of general mouth hygiene, to remove salivary calculus, relieve pain from exposed pulps, treat abscessed teeth and other suppurative conditions of the mouth, under the direction of the dental attendant.

Except in very uncleanly and badly diseased mouths, the nurse will be able to render considerable relief and give much comfort to her patients by following the regime just laid down.

As soon as a patient is strong enough to sit up in bed, the toothbrush should be used, rinsing the mouth with sterile water or a saturated solution of boric acid flavored with orange water for its refreshing effects.

It is never wise to prolong the process of mouth cleansing to the point of causing fatigue, as this would be harmful. Gentleness of touch, dexterity of manipulation and a sympathetic manner will soon allay all nervous apprehensiveness on the part of the patient; for it is a peculiar fact that most people have a nervous dread of dental manipulations.

In the treatment of mouths affected with rapid dental decay, from the hyper-acid condition already mentioned, the deleterious effects of the acids upon the teeth may be counteracted by the frequent use of alkaline or antacid solutions, such as bicarbonate of soda, one teaspoonful to a half a glass of tepid water, or lime water in the same proportions.

Pregnant and nursing women cannot be too careful about their mouth conditions, as their teeth are prone to dental decay during those periods. The old saying among midwives, which goes back to the early history of civilization, "For every child a woman bears, she loses a tooth," though not absolutely true, is based upon the observed fact that during pregnancy and lactation dental diseases are much more prevalent and serious than during other periods, and that teeth are frequently lost during those periods. Perverted oral secretions, gastric indigestion, malnutrition and faulty metabolism are doubtless the underlying causes.

Many of these women suffer from inflamed and bleeding gums. This is in all probability due to plethora of the upper part of the body induced by the known increase in the volume of blood during pregnancy, and by impeded circulation resulting from the pressure of the gravid uterus upon the descending aorta.

Pregnant women should protect themselves against the loss of their teeth by frequent visits to the family dentist. No woman who can prevent it, should allow herself to approach the lying-in period with her mouth in an unclean or diseased condition, as septic conditions of the mouth are exceedingly dangerous to the lying-in woman. Many accouchers are now so impressed with this fact that they insist upon their patients having all septic teeth rendered sterile by proper dental treatment, or extracted, before the lying-in period, or refuse to be held responsible for the after results, if sepsis follows parturition. Many surgeons, likewise, refuse to operate in certain cases, especially abdominal cases, or general non-septic cases, until the mouth and teeth have been carefully inspected for septic conditions, and, if present, cured or removed before undertaking the more serious operations.

Only a few years ago no such thought was given to the possible dangers to the success of a delivery, or of a surgical operation from a septic condition of the mouth. These facts are becoming more and more widely recognized by the profession, and with corresponding benefit to suffering humanity.

Pregnant and nursing women frequently complain of excessive sensitiveness of their teeth to changes of temperature and to sweets and acids. This condition is usually due either to an unclean condition of the mouth, with acid fermentation; to food debris, or to dental decay either superficial or progressive in its character. This may be overcome by thorough cleanliness of the mouth, the treatment and filling of the decayed teeth and the use of bicarbonate of soda, milk of magnesia, or lime water, as indicated on a preceding page.

In the brief time allotted to me for the presentation of this subject, I have been able to touch only a few of the high places. The paper is, therefore, more or less incomplete and might, with advantage, be considerably elaborated.

If, however, I have interested you sufficiently in this matter to cause you to give it a little serious thought and attention, my mission will have been fulfilled.

I am sure that, if you give it this thought, you will see the necessity of every hospital having upon its visiting staff a thoroughly competent dental surgeon, or a dental-interne and one or two specially trained nurses who will, under his direction, care for the teeth and mouths of the seriously ill and the bed-ridden patients who, by reason of their infirmities, are unable to care for themselves, and thus, by a proper hygienic regime, prevent much suffering, relieve acute pain when present, arrest in its incipiency the ravages of dental caries, and keep the other oral tissues in a comparatively healthy condition.

COMPLETE REMOVAL OF PAROTID GLAND WITHOUT INJURY TO FACIAL NERVE.*

By J. HENRY BARBAT, M. D., San Francisco.

The complete removal of the parotid gland is indicated in cases of malignant growth, and according to most authorities on the subject, necessitates the sacrifice of the facial nerve. When the growth is limited to the parotid, and the tumor not too large, it is feasible to save the facial nerve and avoid a most distressing deformity. This can be accomplished by a careful dissection of the nerve through the parotid tissue, after finding one of its branches as far from the malignant focus as possible. The branch is then traced back to the main nerve and then worked out exactly as in the dissecting room. This can usually be accomplished without cutting through the growth proper, as we find that the nerve fibres are pushed to one side instead of being involved in the malignant process. Even when nerve fibres are found passing directly through malignant tumors we very often find that the disease process has not invaded the nerves, and with correct technic it is possible to cut them out without running any serious risk of implanting malignant cells in the surrounding tissues.

Tumors of the parotid, exclusive of retention cysts, are in the majority of cases of the endothelial type. If allowed to grow, a large proportion of these endotheliomata eventually become malignant. For this reason it is the duty of the surgeon to advise removal of these growths immediately, and if the pathological report shows the tumor to be of the mixed variety, complete removal of the parotid is indicated.

Miss B., referred to me by Doctor George H. Evans, strained her neck two years before the onset of the present trouble, and shortly after noticed a small lump in front of the right ear. Occasional attacks of slight pain, but no tenderness. The tumor has been growing steadily, and the patient seeks relief on account of the deformity produced. Examination shows a firm mass one and a half inches in diameter in front of the right ear, freely movable under the skin and over the deep structures, and evidently in the substance of the parotid gland. Palpation gives a sensation of very thick contents. No tenderness.

The first operation was done on the 19th of April, 1915. A small incision was made directly over the swelling, cutting through the gland substance into the tumor. Ten c.c. of thick gelatinous material was squeezed out, followed by very free bleeding. The cavity was packed with a strip of gauze. The gelatinous material was submitted to Drs. Ophüls and Knapp, who reported that the sections show mucous tissue in which there are many irregular, freely anastomozing spaces filled with atypical cells of epithelial type. Diagnosis, Endothelioma of parotid gland (mixed tumor).

With this diagnosis it was decided to remove the entire gland and the operation was done one week after the first one. The original incision was prolonged, and the dissection of the parotid begun from below keeping well outside the capsule. The first nerve encountered was the posterior auricular, which was dissected free and held to one side. The supramaxillary branch was next picked up and dissected back through the gland to its junction with the buccal and inframaxillary branches, which were then dissected forward until they emerged from the anterior edge of the gland. The external carotid was ligated doubly and cut, just before its terminal division, and the deep temporal vein tied.

The temporofacial division of the facial nerve was then dissected forward through the gland, the upper ends of the temporal and internal maxillary arteries tied and the gland removed, skin closed with horsehair and silkworm gut drain placed at lower angle. Paralysis of the facial muscles was complete. The wound healed without any complications, and massage and electricity were instituted two weeks after the operation.

The first evidence of returning motion occurred on June 21, eight weeks following operation, in the depressor anguli oris. This was followed in a few days by motion in the risorius. Next came the elevators of the upper lip and intrinsic nasal muscles, then the orbicularis palpebrarum and corrugator supercilii. The last muscle to be completely restored was the orbicularis oris, evidenced

* Read at the St. Luke's Hospital Clinical Evening, San Francisco County Medical Society, December 7, 1915

by the patient's ability to whistle. This occurred about 18 weeks after the operation.

Discussion.

Dr. Alfred Newman: Dr. Barbat said that in the case of a mixed tumor of the parotid—even a small tumor—it is necessary to do this radical operation. I operated on one of these tumors of the parotid, a small tumor about the size of a walnut, situated in front of the ear, which I mistook for a wen. I operated in the office under local anesthesia, and made a cosmetic incision about the angle of the jaw. After I got into the tumor, I saw it was not a wen, but something with tentacles firmly anchored in the substance of the parotid, which is typical of the capsule of such growths. The capsule burst and the tumor masses poured out. All that was left to do was to curette it out, put in a drain and sew up the wound. That was seven years ago, and fortunately the growth has not yet returned.

These things usually run in pairs, and shortly after I got another patient with a similar tumor, but this time I made the diagnosis beforehand. I operated it with the thermocautery, simply cutting the tumor out with the red-hot cautery and closing up the wound at once. This case has also remained well.

CASE REPORTS.*

By PAUL S. CAMPICHE, M. D., San Francisco.

The first man fell down in a mine and sustained several injuries. He was treated four months in another state, then he came to San Francisco. In March 1915, I examined him. The left elbow was completely ankylosed at an angle of 165 degrees, evidently as the consequence of a traumatic infection. The right leg had a shortening of nearly three inches of which two and one-quarter were due to a fracture of the shaft of the femur, and half an inch due to the fracture of the tibia and fibula. This last fracture was left alone as the general alignment of the tibia was good, in spite of the slight shortening. The right femur, which had an angular deformity and much shortening, was treated by linear osteotomy with hammer and chisel, and the leg put in Heusner's extension (with flannel and rosin solution).

For the ankylosis of the left elbow I did (the same day) a resection with arthroplasty with an attached flap of fascia taken from the back of the arm.

You see the result now. The motion of the left elbow is perfect. As to the femur, the X-rays show that the shortening is now only one-half an inch. Counting the tibia this leaves a total shortening of one inch for the whole leg. This is the best we could do, owing to the marked retraction of the muscle which had taken place during the four months. The patient could not walk even with crutches, and was carried into my office by some of his friends, so that in spite of the slight shortening, he is well pleased with the result.

The second patient had a transverse fracture of the patella, which I wired on October 16, 1914.

The test for a good result for fractures of the patella is to have the patient climb on a chair with the bad leg first. You see that he can do that. I prefer silver wire to catgut in suturing the patella, because it allows us to move the joint two or three days after the operation (which I think would not be safe with catgut), and of course the early movements insure a much more rapid recovery of the function of the joint.

The third patient is a very simple case. He had a fracture of the humerus with muscular interposition which I diagnosed by the absence of crepitus and which was confirmed by the X-ray's plate. The indication to operate was absolute here. I dissected the two muscles out of the way and wired the two fragments and got solid union in five weeks. This shows in my opinion how unnecessary the use of splints is when we can get a solid union by a much more simple procedure, using only a bit of silver wire. Of course the use of external splints is most important. In this case we used the classic cardboard dressing.

The last case is the one of a gentleman 74 years old, who noticed about a year ago, without injury, fall, or any other cause, that his head was dropping forward. When we saw him first his lower jaw was resting on his sternum. There was a marked kyphosis of the cervical spine; the forked spinous process of the axis could be felt, but above that the occipital bone seemed sharply displaced forward. The head resting on the sternum, we could not explore the spine from the mouth, as the patient could not open his mouth. The movements were very limited but not very painful. There was no paralysis of any kind.

The excellent X-ray picture taken by Mr. Sabalot, the radiologist of the French Hospital, confirmed our diagnosis of forward dislocation of the head. The odontoid process could not be seen and had apparently been destroyed and the atlas carrying the head had slipped forward. The medulla was bent at a right angle. The absence of nervous symptoms was probably due to the fact that the trouble came on very slowly.

We have thought of a secondary neoplasm but could not find any primary lesion. The fact that he moves without much pain speaks against tuberculosis. We suspect that the odontoid process has been destroyed by some gumma and the fact that he has improved since he takes iodide of potassium seems to confirm the view.

Dr. T. T. Watkins: I think Dr. Campiche is to be congratulated, speaking generally, upon his results. The femur case is a good result and satisfactory for that sort of work.

The elbow case is interesting by reason of the fact that the elbow is, perhaps, the only joint in which most of us have had any success with the arthroplasty, as adopted by Dr. Murphy. You will notice there is a good deal of side to side play. You will notice, also, that he has very little strength as yet. However, I think that he will, in time, reacquire considerable strength in

* Read before the San Francisco County Medical Society, November 16, 1915.

that arm. Eastern colleagues of mine have called my attention to the fact that no matter what we do to the elbow, whether we put in membrane or fascia, or do a generous excision, the result is going to be fairly good. Not so the knee; not so the hip.

The Doctor's most interesting case, of course, is that neck case, because, as he has told it, that is not an acute affair. I have seen one such case with a partial dislocation, where the examining finger in the mouth and the X-ray proved the presence of characteristic deformity. This was an old Italian, who found relief from sub-occipital and post auricular pain.

I have seen two cases only which were the result of trauma. In one case, a child was running along on skates and fell with her companion and with her neck across the companion's foot. It snapped the neck and would have broken it, excepting the floor stopped the further progress of the head. The X-ray showed very clearly a true dislocation of one-half of the atlas upon the axis. I put the child up with constant extension and let her alone. I was afraid to attempt manipulative reduction. I knew the shock must have torn in part at least the check ligaments of the odontoid and that the respiratory center was just in front of the odontoid process. The next morning the dislocation had reduced itself under the influence of the permanent traction and the relaxation caused by sleep.

The other was a queer case. A man tumbled off a reaper backward and struck his head. This was at once displaced to one side and he suffered great pain radiating up over the head. I cut his shaving strop into two pieces and made a head sling to support the head. I then raised the head of the bed on stilts. He had great pain, radiating upward along the posterior articular and sub-occipital nerve. Relief from pain was immediate. He fell asleep as we were looking at him, and he had not slept for three days. He, too, reduced himself, so to speak, and he got well also.

The Doctor's patient presents the result of a slow process, and I think to attempt to correct it would probably kill the man by causing his odontoid process to destroy his respiratory center.

Again I wish to thank Dr. Campiche for presenting so interesting a group of cases.

BOOK REVIEWS

Bandaging. By A. D. Whiting, M. D., Instructor in Surgery at the University of Pennsylvania. 12 mo. of 151 pages, with 117 original illustrations. Philadelphia and London. W. B. Saunders Company, 1915. Cloth, $1.25 net.

Any addition to the sadly neglected art of bandaging ought to be greeted with satisfaction by all of us, and Whiting's effort in this field deserves due credit. The author omits all the old Latin names, for which I do not blame him, and he has also discarded many of the classic bandages, and replaced them by more simple contrivances of his own. Experience will show whether these hold as well as the old ones.

We regret to find no reference to such works as Hoffa's Verbandlehre. One should not bother with such names as Thoracico-Scapular, Mento-Vertico-Occipital, and so forth, which the author uses for the handkerchief bandages. The figures are numerous and generally correct.

The book deals only with the roller bandages and with the handkerchief bandages, and for these can be recommended to students and nurses.

P. C.

The Starvation Treatment of Diabetes With a Series of Graduate Diets as Used at the Massachusetts General Hospital. By Lewis Webb Hill, M. D., and Rena S. Eckman, Dietitian. Introduction by Richard C. Cabot, M. D. Cloth. Price, $1. Pp. 72. Boston: W. M. Leonard, 1915.

This little monograph contains a brief statement of the Allen treatment of diabetes as practiced at the Massachusetts General Hospital together with a carefully prepared list of graduated diets. The technic of the Allen treatment is not difficult to master according to this book. In fact it would seem very simple were it not that the real difficulty comes when the actual diet problems confront the physician who is not accustomed to figuring diets in percentages of certain definite foodstuffs.

To the practicing physician this little book should be of value provided he has followed the literature in regard to the Allen treatment. As a ready reference it can certainly be recommended to all physicians.

W. W. B.

Diseases of the Nervous System: A Text-Book of Neurology and Psychiatry. By Smith Ely Jelliffe, M. D., Ph. D., Adjunct Professor of Diseases of the Mind and Nervous System, New York Post-Graduate Medical School and Hospital, and William A. White, M. D., Superintendent of the Government Hospital for the Insane, Washington, D. C.; Professor of Nervous and Mental Diseases, Georgetown University; Professor of Mental Diseases, George Washington University, and Lecturer on Psychiatry, U. S. Army and U. S. Navy Medical Schools. Octavo, 796 pages, with 331 engravings and 11 plates. Cloth, $6.00 net. Lea & Febiger, Publishers, Philadelphia and New York, 1915.

The contents of this book of 781 pages are divided into three major portions. Part I deals with the Pshysico-Chemical Systems (vegetative or visceral neurology), Part II, Sensori-Motor Systems, and Part III with Psychic or Symbolic Systems. The classification will thus be seen to be distinctive. Part I contains references to important advances in our knowledge of diseases of the sympathetic nervous system and of the glands of internal secretion. In general, it may be said of this work that the different phases of neurology and psychiatry have been brought up to date; the book is profusely illustrated by well chosen diagrams and photographs. Especial mention should be made in this regard of the numerous colored plates and accompanying translated descriptions taken from the late edition of "Semiologie des Affections du Systeme Nerveux," by J. Dejerine. A feature worthy of mention is the historical aspect of many of the diseases discussed.

It is to be expected that such a warm exponent of the Freudian hypothesis as is Jelliffe, would discuss the psychoneurosis, and such phychoses as dementia praecox and the paranoid states, from the standpoint of interpretation and treatment by psychanalysis. This discussion, however, is not to the exclusion of the discussion of other theories and other treatments, and while the tendency to incline toward the Freudian views is evident, it is noted with pleasure that the treatment of the subject is conservative—much more so than we have noted in other recent works on this subject. In Chapter XVI an outline is given of the psychanalytic theory. The concluding chapter discusses idiocy, feeblemindedness and the defect groups, conditions toward which our attention has been directed of late because of their importance in relation to pedagogy and criminology.

W. F. S.

SOCIETY REPORTS

ALAMEDA COUNTY.

Annual Meeting December 21, 1915.

The regular monthly and annual meeting of the Alameda County Medical Association was held at the Hotel Oakland, Tuesday evening, December 21, 1915. The meeting was called to order by the President, Dr. G. G. Reinle. The minutes of the previous meeting were read and approved.

The following program was presented:

I. Case Report. Dr. Florence Sylvester.

II. Psychogenetic Factors in Organic Nervous Diseases. Dr. Clifford W. Mack.

III. The Etiology of Cancer. Dr. Geo. T. Pomeroy.

The secretary read resolutions in regard to the death of Dr. G. B. N. Clow, which were ordered placed in the minutes and a copy sent to the family.

The reports of the secretary of the Board of Councilors and of the secretary-treasurer were read and on motion accepted.

Dr. Makinson, chairman of the Board of Tellers, announced the result of the annual election as follows:

President, Dr. David Hadden; vice-president, Dr. W. H. Irwin; secretary-treasurer, Dr. Elmer E. Brinckerhoff; councilors, Drs. L. P. Adams, W. A. Clark, J. L. Milton, Pauline S. Nusbaumer, Alvin Powell and Dudley Smith; delegates 1916-17, Drs. A. S. Kelly, T. C. McCleave, J. L. Milton and Geo. G. Reinle; alternate delegates, Drs. G. Irwin Brinckerhoff, S. H. Buteau, Thos. J. Clark, A. F. Gillihan, D. Hadden, Gertrude Moore, R. T. Stratton and W. H. Strietmann.

The new president, Dr. Hadden, was introduced. Dr. Irwin, the new vice-president, was not present. There being no further business the meeting adjourned.

ELMER E. BRINCKERHOFF, Secretary.

FRESNO COUNTY.

The Fresno County Medical Society met on the evening of January 4, 1916, in the offices of Drs. T. N. Sample and A. B. McConnell, Dr. Harry J. Craycroft (vice-president) presiding. About thirty members present.

The Committee on Arrangements for the State Society Meeting to be held in Fresno in April, reported through its Secretary, Dr. Staniford, that several sub-committees had been appointed and that considerable progress was being made in the preparation for this meeting. It was reported that each member of the General Committee thoroughly appreciated the responsibility imposed upon him and that he was not only willing, but eager, to assume any additional duties which the Chairman might wish to assign to him.

The following resolution was read for the second time and adopted:

Resolved, That the By-Laws be so changed as to read: "The President and the Secretary shall be ex-officio members of the Board of Governors, and the Secretary of the Society shall be the Secretary of the Board of Governors."

The election of officers for the year 1916 was then held and the following were accordingly elected:

President, Dr. L. R. Willson; First Vice-President, Dr. Harry J. Craycroft; Second Vice-President, Dr. J. H. Pettis; Secretary, Dr. Kenneth J. Staniford; Assistant Secretary, Dr. C. D. Sweet; Treasurer, Dr. T. M. Hayden; Member of Board of Governors, Dr. George M. Aiken; Delegates to State Society, Drs. A. B. McConnell, J. H. Pettis, C. P. H. Kjaerbye; Alternates, Drs. W. P. Miller, E. J. Couey, Guy Manson.

The paper of the evening was by Dr. Langley Porter of San Francisco, and was certainly a most enjoyable one upon the subject "Obstruction of the Bowel in Infants and Children." Dr. Porter presented the subject in a very thorough manner, giving case-histories, and illustrating various conditions of obstruction with specimens and photographs.

Dr. Morton Gibbons of the medical staff of the Industrial Accident Commission was also a guest of the Society, and discussed, at length, the laws governing Accidents and Compensation. We are greatly indebted to Dr. Gibbons for being with us and giving us a better insight to this phase of our medical work.

The Society accepted the invitation of Dr. A. H. Sweeney to meet with him in January.

After a general social hour, the meeting adjourned.

KENNETH J. STANIFORD, Secretary.

The Fresno County Medical Society held its regular monthly meeting on the evening of February 1st with Dr. A. H. Sweeney.

Dr. J. H. Pettis, 2nd Vice-President, presided, with twenty-five members present. Minutes, January meeting read and approved.

The application of Dr. Wallace B. Hardie of Del Rey for membership was read, before being referred to the Secretary of the State Society for his consideration.

Annual reports of the Secretary and Treasurer for 1915 were read and referred to the Finance Committee.

The Secretary of the Committee on Arrangements for the coming State Society Meeting reported that most of the arrangements had been completed, already, and that all plans for the entertainment of the Society would be announced very soon.

It was moved, seconded and carried that a warrant be drawn on the Treasurer for the amount due the State Society for all members in good standing up to the present time; and that this amount be forwarded to the State Secretary.

A copy of Resolutions passed by The Southern Medical Association at Dallas, Texas, November 1915 was read. These Resolutions asked for a material increase in the number of medical officers in a proposed reorganization of the military establishment. The Resolutions were endorsed by the Society and the Secretary was instructed to send copies to our Senators and Congressmen asking for their careful consideration of the same.

Resolutions passed by the Los Angeles County Medical Association January 20, 1916, in regard to the possibility of bringing about the adoption of a more equitable fee table for Industrial Accident work, were presented for consideration. The reading of these resolutions resulted in a great deal of discussion pro and con, most of the members taking part. A motion was made, seconded and carried that the Society endorse the Resolutions as read.

Many routine business matters were considered and there was no scientific program.

March meeting will be held with Drs. Walker and Kjaerbye.

After general social hour and refreshments, meeting adjourned.

KENNETH STANNIFORD, Secretary.

MARIN COUNTY.

The regular monthly meeting for January, 1916, was held at the home of Dr. H. O. Howitt, San Rafael. A very interesting paper on "Abarticular Gout" was read by Dr. H. D'Arcy Power of San Francisco. There followed a general discussion, after which refreshments were served.

The following officers were elected for the ensuing year: President, Dr. L. L. Stanley, San Quentin; Vice-President, Dr. R. G. Dufficy, San Rafael; Secretary, Dr. O. P. Stowe, Mill Valley; Trustees—Dr. A. H. Mays, Sausalito; Dr. W. F. Jones, San Rafael; Dr. J. H. Kuser, San Rafael; Delegate to State Convention at Fresno, Dr. E. J. Hund, San

Anselmo; Alternate Delegate, Dr. H. O. Howitt, San Rafael.

Dr. James P. Crawford of San Quentin was elected to membership.

O. P. STOWE, Secretary.

ORTHOPEDIC ASSOCIATION.

The American Orthopedic Association announces the appointment of Dr. Mark H. Rogers, Boston, as editor of the American Journal of Orthopedic Surgery, the only periodical in the English language devoted to Orthopedics. This Journal, which has now completed 13 volumes as a quarterly publication, will henceforth be issued monthly, the first number in the new form being that of January, 1916.

The office of publication has been transferred from Philadelphia to Ernest Gregory, 126 Massachusetts avenue, Boston. The subscription price is $4.00 per year.

POLYCLINIC BANQUET.

The annual banquet of the San Francisco Polyclinic Society was held at Solari's Grill on January 12, 1916. Important matters relating to the future of the Polyclinic were discussed by Drs. P. K. Brown, Regensberger, Newmark, Horn and others.

The officers elected for the ensuing year are: President, Dr. W. E. Stevens; Vice-President, Dr. H. P. Robarts; Secretary and Treasurer, Dr. A. S. Green.

SACRAMENTO COUNTY.

The regular annual meeting of the Sacramento Society for Medical Improvement was called to order by Dr. J. H. Parkinson, at 8:30 p. m., December 21, 1915.

The financial statement was read by the Secretary. Budget for the following year was read. The assessment of $6.00 for the State Society and $5.00 for the local Society, $11.00 in all, was voted by the Society. Dr. W. A. Sawyer, Secretary of the State Board of Health, was elected to membership. The following Directors were elected for the ensuing year: Drs. J. H. Parkinson, J. W. James, S. E. Simmons, F. F. Gundrum. Upon the organization of the Board: Dr. J. H. Parkinson, President; J. W. James, Vice-President; F. F. Gundrum, Secretary-Treasurer. As no meeting of the State Society was held in 1915, the delegates elected December 15, 1914, were instructed to hold office and present themselves at the Fresno meeting. Adjourned 10 p. m.

F. F. GUNDRUM, M. D., Secretary-Treasurer.

The regular January meeting of the Sacramento Society for Medical Improvement was called to order by Dr. J. H. Parkinson, at the Hotel Sacramento, at 8:45 p. m., January 18, 1916.

Thirty members present. Minutes read and approved.

Report of Cases:

1. Dr. S. E. Simmons reported a case of Cholelithiasis with pancreatic cyst developing after the operation for stones.
2. Dr. G. A. White reported a case of dumbbell-shaped gallstones, crushing of which was necessary for removal.
3. Dr. H. D. Barnard reported a case of atresia of vagina.
4. Dr. W. A. Beattie reported a case of Reynaud's disease.
5. Dr. E. T. Rulison reported a case of toxemia of pregnancy treated with serum from a normally pregnant patient.

The paper of the evening, "High Caloric Diet in Children in Typhoid Fever," read by Dr. H. H. Yerington of San Francisco. Discussed by Drs. S. E. Simmons, J. W. James, E. W. Twitchell, L. G. Reynolds, E. Pitts, G. A. White, A. B. Diepenbrock, W. A. Beattie, E. T. Rulison, F. Grazer, E. C. Turner, S. J. Wells, T. J. Cox, F. F. Gundrum, J. H. Parkinson. Discussion closed by Dr. Yerington.

The Secretary then read the minutes of the meeting of April 1868, upon which date a paper upon Typhoid was read.

Report of Board of Directors read.

Letter from Dr. Sherman re resolutions from Dallas, Texas, read. Moved by Dr. Hanna, seconded by Dr. Dillon and carried that these resolutions be adopted and copied and sent to the Third District of California Representative in Congress.

Vote of thanks extended to Dr. Yerington.

Adjourned 11 p. m.

F. F. GUNDRUM, Secretary.

SAN DIEGO COUNTY.

At the Annual Meeting of the San Diego County Medical Society the following officers were elected: President, Dr. John C. Yates, Watts Building, San Diego; Vice-President, Dr. Otto G. Wicherski, Watts Building, San Diego; Secretary-Treasurer, Dr. Andrew J. Thornton, 415 Elm Street, San Diego.

ANDREW J. THORNTON, Secretary.

SAN JOAQUIN COUNTY.

The first regular meeting of the San Joaquin County Medical Society for the year 1916 was held at the residence of Dr. W. J. Young, Friday evening, January 28th. The following members were present: Drs. W. J. Young, F. P. Clark, R. T. McGurk, B. J. Powell, H. Smythe, C. F. English, H. J. Bolinger, J. D. Dameron, R. R. Hammond, L. Dozier, L. R. Johnson, J. V. Craviotto, R. B. Knight and D. R. Powell, with Dr. McNeil of Stockton and Dr. Emmet Rixford of San Francisco as guests.

Dr. Emmet Rixford presented the paper of the evening on the mechanism of fractures, discussing in particular fractures about the elbow.

At the close of the paper, the members adjourned to partake of a delightful social repast.

DR. DEWEY R. POWELL,
Secretary.

SANTA BARBARA COUNTY MEDICAL SOCIETY.

The Santa Barbara County Medical Society met in regular Annual Business Session at the Arlington Hotel on Monday, January 10th, at 8 p. m. The meeting was called to order by the President, Dr. William H. Flint, the Secretary, Dr. William T. Barry, at his desk. Present: Drs. Barry, R. Brown, Flint, Campbell, Ryan, Stevens and T. A. Stoddard, a total of seven members; no guests and no visitors.

After reports of a few clinical cases, and an excellent paper by Dr. Rexwald Brown, entitled "A Surgical Review," the Society proceeded to the election of officers for 1916, with the following result:

President, Charles S. Stoddard, M. D., Santa Barbara; Vice-President, William T. Lucas, M. D., Santa Maria; First Vice-President, L. R. Ryan, M. D., Santa Barbara; Secretary-Treasurer, William T. Barry, M. D., Santa Barbara; Delegate (to serve two years), William H. Campbell, M. D., Santa Barbara; Alternate Delegate (to serve two years), Charles S. Stevens, M. D., Santa Barbara.

On motion of Dr. Stevens, the Secretary was instructed to prepare a circular letter addressed to the druggists of Santa Barbara, calling their attention to the dangerous practice (of some) of counter prescribing, refilling prescriptions unauthorized by the physician, and the necessity of obeying to the letter the Harrison narcotic law.

The Secretary was authorized to consult with the City Attorney. The Chair, upon motion, appointed a committee consisting of Drs. Barry and Stevens,

to interview Public Library authorities, looking to the securing of a medical section in the library building for the use of the physicians of Santa Barbara county.

After a cordial vote of thanks to the retiring President, Dr. William H. Flint, the Society adjourned.

WILLIAM T. BARRY, M. D., Secretary.

N. B.—The Secretary reports the election of two new members: Harold F. Pierce, M. D., Santa Barbara; Frederick A. Brown, M. D., Lompoc.

STANFORD UNIVERSITY MEDICAL SCHOOL.

Cooper Clinical Society.

You are cordially invited to attend the meeting of the Cooper Clinical Society which will be held on Monday, March 6, 1916, at 8 p. m., Room 311 of the Clinic and Laboratory Building, Stanford University Medical School, corner Sacramento and Webster streets.

Program.

1. Cases from Lane Hospital.
2. "Botulism, Its Occurrence in California" (demonstration of slides). E. C. Dickson.
3. "The American Red Cross Work in Serbia. Shadworth Beasley.

GEORGE D. BARNETT, Secretary.

H. E. ALDERSON, President.

STANISLAUS COUNTY.

The following report of the last meeting of the Stanislaus Medical Society is submitted:

A joint meeting of the Stanislaus and Merced County Medical societies was held in Turlock on the evening of January 14, sixteen members being present. Dr. Emmet Rixford of Leland Stanford gave the address of the evening, his subject being "The After Treatment in Laparotomy Cases." This was a practical, plain talk that had meat in it.

Dr. A. M. Field of Patterson was elected a member of the Stanislaus society. A fine banquet furnished by the physicians of Turlock followed the address. The evening was profitably spent and thoroughly enjoyed by all present.

E. F. REAMER, Secretary.

PROCEEDINGS OF THE SAN FRANCISCO COUNTY MEDICAL SOCIETY.

During the month of January, 1916, the following meetings were held:

Tuesday, January 4th—Section on Medicine.

1. Presentation of Cases from the Skin Clinic of Stanford University Medical School. Harry E. Alderson.
   (a) Lupus vulgaris.
   (b) Leprosy.
   Discussed by E. D. Chipman, Howard Morrow, M. Silverberg, A. A. O'Neill and H. E. Alderson.
   (c) Report of Case: Syphilis acquired and cured during pregnancy; normal delivery of healthy child; reinfection of mother.
2. Presentation of Cases and Lantern Slide Demonstration. Howard Morrow.
   (a) Rodent nodule of cheek.
   (b) Microscopic section of burrow of scabies, showing female ascaris, ova and excreta in one field.
   (c) Leprosy.
   (d) Asymmetry.
3. Streptococcic Infections of the Skin. E. D. Chipman.
   Discussed by H. E. Alderson, J. C. Pickett, C. F. Welty, Howard Morrow, B. Jablons and E. D. Chipman.

Tuesday, January 11th, General Meeting University of California Hospital Clinical Evening.

1. Calcification of aorta due to syphilis.
   Tuberculosis of esophagus. H. C. Moffitt.
   Case of anemia with neuritis.
   Mediastinal obstruction. G. E. Ebright.
2. Classification and Treatment of Hemorrhagic Diseases. S. H. Hurwitz.
3. Laryngeal stenosis. S. T. Pope.
   Subphrenic abscess.
   Extensive carcinoma of stomach; jejunostomy. W. I. Terry.
4. Demonstration of Kidney and Ureteral Plates. Frank Hinman.
5. Congenital cerebral malformation.
   Traumatic encephalitis.
   Congenital syphilis. W. P. Lucas.
6. Unusual case of sarcomatous degeneration in small tumor with pregnancy.
   Carcinoma of the uterus. Frank Lynch.
   Demonstration of specimen of uterine myoma; myomectomy. J. C. Neel.

Tuesday, January 18th—Section on Surgery.

1. Tumors of the Appendix. J. P. Pratt.
   Discussed by E. Rixford, Saxton Pope, G. C. Macdonald, H. A. L. Ryfkogel and H. R. Oliver.
2. Some Interesting Tumors of the Bowel. J. F. Cowan.
   Discussed by E. Rixford.
3. The future welfare of the Surgical Section was discussed by Harold Brunn, Sol. Hyman, J. Rosenstirn, E. Rixford and F. B. Carpenter.

Tuesday, January 25th—Section on Eye, Ear, Nose and Throat.

1. Demonstration of Laryngeal Case. Harvard McNaught.
   Discussed by H. Horn, C. F. Welty and H. B. Graham.
2. Pyorrhea as a Focal Disease. T. Sydney Smith.
   Discussed by F. C. Pague, C. F. Welty, H. McNaught, J. T. Watkins and T. S. Smith.
3. Remote Effects of Resection of the Nasal Septum. Harvard McNaught.

Transactions of the Surgical Section of the San Francisco County Medical Society.

Regular meeting, January 18, 1916. Chairman, Harold Brunn, M. D.

(Discussions abstracted by James Eaves, M. D.).

Tumors of the Appendix. J. P. Pratt, M. D.

Dr. Pratt briefly reviewed the literature of tumors of the appendix, including polyps, myoma, fibroma, myxoma and lipoma of the benign types; carcinoma and sarcoma of the malignant.

He showed a specimen of pseudo-mucinous cyst of the appendix and several carcinomas having their origin in this region. He stated that in the last 100 cases examined at the University of California Hospital, 4% of carcinomas were found, which is higher than the usual percentage. He discussed the different opinions of pathologists concerning these carcinomas, and pointed out their benignancy in comparison with carcinomas elsewhere. In the discussion of pseudo-myxomas he drew attention to the occurrence of pseudo-myxoma peritonei resulting from their rupture into the peritoneal cavity; this myxomatous substance, he stated, had frequently been mistaken for colloid carcinoma.

In the discussion following, Dr. Emmet Rixford stated he had not found 4% in his experience. In one case whilst operating for hernia he found the sac filled with jelly and on further investigation discovered a primary gelatinous carcinoma of the appendix. The man is alive and well eight years after operation. In another case whilst operating for intussusception he discovered a primary carcinoma of the appendix which was the causal factor.

Dr. Saxton Pope spoke of a case he had seen six months ago with acute appendicitis, and at that

time remarked upon the high leucocyte count which was out of all proportion to the symptoms—24,000 W.B.C. No fever, no pain. Two weeks ago Dr. Terry operated, and found a carcinoma of the appendix with pus and involving the cecum secondarily. Inoperable.

Dr. H. A. L. Ryfkogel called attention to a case he had operated 23 years ago for retroversion and at the same time removed the appendix, presumably healthy. Later it was discovered to contain a small tumor which turned out to be a typical carcinoma.

Dr. H. R. Oliver referred to a case taken at operation to be carcinoma but later proved to be scar tissue due to abscess formation.

Dr. G. C. Macdonald stated that he removed an appendix in which later examination revealed a myxomatous cyst.

Dr. Brunn, Chairman of the Section, thanked Dr. Pratt and felt that the paper had shown how important it was to have routine microscopical examinations always made.

Some Interesting Tumors of the Bowel.

J. F. Cowan, M. D.

Dr. Cowan showed a series of remarkable specimens of the gastro-intestinal tract. These included carcinoma of the esophagus; hypertrophic stenosis of the pylorus in infancy; a very rare specimen of sarcoma of the large bowel; carcinoma of the colon and rectum; scirrhous carcinoma involving the entire wall of the stomach; large papillary adenocarcinoma of the stomach; pedunculated fibrosarcoma of the sigmoid; and large fibrosarcoma (sessile) involving the wall of the cecum.

LOS ANGELES COUNTY MEDICAL ASSOCIATION.

Annual Report for the Fiscal Year Ending Thursday, December 16, 1915.

To the Members of the Los Angeles County Medical Association:

Your Secretary-Treasurer begs leave to submit the following report for the forty-fifth year of the Association.

Financial Report Los Angeles County Medical Association.

(For the Fiscal Year Ending December 16, 1915.)

A. Maintenance Income for 1915.

Total amount of 1915 dues received in 1915 was		$10,422.50
This income is divided as follows:		
671 Members at $15.00	$10,065.00	
23 Members at $7.50 (These were new members who entered after July 1st)	172.50	
10 Members at $16.00 ($1.00 penalty for delinquent payments)	160.00	
1 Member at $11.00	11.00	
1 Member at $9.00	9.00	
1 Member at $5.00 (These last three members from other county societies—at the difference in amount of dues.)	5.00	
Total	$10,422.50	
Miscellaneous Income (This for insertion of doctors' names under the number of the Telephone Exchange in telephone directories, etc.)		32.38
Balance carried over from 1914		42.54
Grand total all income during 1915		$10,497.42

B. Maintenance Expenses of 1915.

1.	Paid Assessments to State Society ($6.00 per member.) (Unpaid assessments to a total of $144.00 still outstanding)	$ 4,092.00
2.	Envelopes and Postage	325.35
3.	Printing Bills (Unpaid bills to a total of $506.00 outstanding)	469.33
4.	Hall Rent (Unpaid bills to a total of $40.00 outstanding)	135.00
5.	Refreshments at Regular Meetings (Unpaid bills to a total of $100.00 outstanding)	533.80
6.	Clerical Expenses	683.40
7.	Branch Refunders for Branch Expenses and Refunders to Out-of-town Members)	800.00
8.	Miscellaneous (Stereopticons, etc.)	120.77
9.	Telephone Exchange (Rent of Room and Switch-boards, and Salaries of Operators)	3,333.25
Grand Total all expenditures during 1915		$10,492.90

C. Summary.

Grand total all income during the year 1915	$10,497.42
Grand total all expenditures during the year 1915	10,492.90
Balance on hand December 16, 1915	$ 4.52

From the above it will be seen that while the Association nominally closes its fiscal year with a balance of $4.52, there is a total deficit, when one includes the unpaid bills, namely, the printing bills, bills for hall rent, etc., of $785.48.

It must be remembered, however, that the above deficit which exists today (December 15, 1915), includes the deficits of the previous years, which may be said to have started in 1913, when $1186.94 was spent in the prosecution of illegal practitioners, and when the prescription outfits were purchased at a cost of $1114.41, which latter indebtedness, however, because of lack of funds, was not paid until 1914 (last year).

Of the above total deficit of $785.48 existing today (December 15, 1915), the sum of $382.43 was mentioned under item 3 of the last year's financial report, and was paid by check No. 39 of the current year.

There is, therefore, a total net deficit of $403.05 existing for the current year, and this deficit would be a deficiency which would arise every year unless in some way the expenditures of the Society were cut down.

The matter of this deficit has been discussed by the Board of Councilors, and the conclusion reached was that during the coming year of 1916 it would be desirable to eliminate certain expenditures of the Society, so that the year 1916 would be closed without a deficit. This end may be attained by the elimination of such expenses as the four full-page advertisements in the Los Angeles City Directory, containing the roster of the members of the Association; by a reduction of the advertisements of the Telephone Exchange, which have been running in the telephone directories (both of which items were needed to help establish our telephone exchange on its present firm basis); by doing away with refreshment features when we entertain prominent men from the East (some of the meetings during the current year of 1915 having cost practically $100.00 an evening because of the large number of members attending); and other expenses of minor character which could be eliminated without detriment to the progress of the Association, or the welfare of its members.

Of course, the special reason for our Society's having a deficit in the last two years, may be said

to have arisen through the institution of our County Medical Society Telephone Exchange, for otherwise there would be a large balance in the treasury which could have been used for other activities. The work, however, which that Exchange is doing (even though the expense of its maintenance is some $3300.00 per year) has been of such tremendous value to a very large number of members of the Association, that it would be most unwise to cut down on this line of activity that has proven so powerful a factor in the development of the Society, through the advantages which it gives to the members of our organization, and to the clients of those members. Our economies must, therefore, be directed along the other lines previously mentioned, and this the Board of Councilors believes will permit us to not only close the coming year without a net current deficit, but also with a reduction in the indebtedness which we have been carrying from the two previous years.

PART II.

General Report on the State of the Association.

Considering now the state of our Society as a whole, we would take up the following items:

1. **Membership.** In spite of the comparatively hard times, we have on our membership roll at the end of the fiscal year a total of 707 paid up members, as against a total of 668 paid up members for last year. An increase therefore of 39 members for the current year.

During the year there have been a number of deaths, several resignations, several transfers, and a number of men have permitted their membership to lapse through non-payment of dues.

On the subject of membership, we may repeat again that some time in January there will be mailed to every member of the Association an application blank, and this blank each member is requested to use if possible, by presenting it to some ethical colleague whom he knows would be benefited by membership in our organization, to the end of having such a colleague join us in the work for which all ethical practitioners should jointly stand. If you know of any such men, then you are requested to place such applications in their hands as early in the fiscal year as possible, so that they may get a full return for their money spent in dues.

The membership figures for the last ten years may not be without a certain historical interest and they are here appended, your present Secretary having assumed office in January, 1910.

The net paid-up annual membership in the Society, by different years, shows as follows:

	No.	Increase
In year 1905 the total membership was	315	
In year 1906 the total membership was	359	44
In year 1907 the total membership was	393	34
In year 1908 the total membership was	398	5
In year 1909 the total membership was	402	4
In year 1910 the total membership was	457	55
In year 1911 the total membership was	561	104
In year 1912 the total membership was	600	39
In year 1913 the total membership was	622	22
In year 1914 the total membership was	668	46
In year 1915 the total membership was	704	36

2. **Scientific Programs.** In connection with the scientific programs of the Los Angeles County Medical Association, it is to be remembered that a double purpose is sought: first, to present scientific matter of high tone; and 2nd, to give as many members of the Association as possible, an opportunity to present before the Society a synopsis of the scientific work in which they may be particularly interested.

Under these conditions, therefore, it would be impossible to limit the essayists to a particular or select group of members from the Association, even if such were the intention, which at no time has ever been the case.

In order to have the programs take on a broader scope, the Board of Councilors, after a discussion of this subject, recently decided to limit the time for each paper, and to follow the plan of certain of the sections of the American Medical Association, the programs of which have always been of high merit, by instituting a limitation on the time length of papers, and having essayists confine themselves to the time periods allotted to them.

It must be agreed by all, that in twenty minutes one can say a great deal; certainly one can present in a twenty-minute period a good digest of any paper, and that is after all what the Association in its open scientific meetings desires to hear, namely a good digest or presentation of major points upon which can be based an intelligent discussion by other members in the audience. The Board of Councilors asks essayists to keep this object in mind, because it is felt that the papers themselves will be of more interest, and that the incentive to a good and broad discussion will add very materially to the profit and enjoyment of the meetings.

As heretofore, a cordial invitation is extended to every member of the Association having any inclination thereto, to send in a reply slip giving the title of a paper or a case report which he would wish to present; and then if an opportunity arises, an effort will be made to place all such papers on the scientific programs.

The matter of more frequent meetings has been discussed by the Board of Councilors at different times. It will be remembered that when the Society several years ago tried to maintain weekly meetings, the average attendance materially fell off, and considerable difficulty was found in securing program material.

At the present time, also, Los Angeles supports the following additional medical organizations: Los Angeles Clinical and Pathological Society, Medical Symposium Society, Obstetrical Society, Eye Society, the Eye, Ear, Nose and Throat Section of our Society, and one or two college societies. It is to be regretted, of course, that several of these societies do not see fit to come in as sections of the County Association, because they could do this and still be practically autonomous, but they seem to feel that they would lose their independence by so doing. The Board of Councilors would probably be willing, however, to grant authority for the formation of County Society sections in the specialties, in case members of the association saw fit to take the initiative and form such sections.

The Board of Councilors has not deemed it wise to divide the work of the Association at large into medical and surgical sections, with separate officers, because it was felt that the Association should hold two general meetings each month, and that two such meetings, with a division of medical and surgical subjects at each meeting, with both medical and surgical men present, and with the refreshment and social features at the end of the meeting, would probably be productive of more interest, attendance and benefit, than four poorly attended meetings of specialists only, and without the refreshments and social features.

In all these matters, however, the Board of Councilors is again willing to try out plans which previously were found unsatisfactory, if such an experiment be the desire of the majority of the members.

Owing to the number of out-of-town essayists and others whom our Society has had the pleasure of having with it during the past year, the clinical meetings at the County Hospital have to a certain

extent been done away with; but during the coming year it is intended to again revive these clinical meetings.

The attempts to have clinical meetings and a large presentation of patients and of specimens at the Hamburger meetings have always proved abortive through lack of cooperation of many men who easily could present patients or specimens, but who for some reason or other seem reluctant to bring their patients before the Society. We suppose this arises from a diffidence in not wishing to bring patients before so large an audience. If we could secure the cooperation of a sufficient number of men, the Program Committee would be very glad indeed to try out this plan some time during the year.

The refreshment and social features of our meetings have been somewhat distinctive of our Society, and have been a big factor, without any doubt, in the building up of good-feeling and fellowship not only among older members of the Association, but especially in presenting an opportunity for our newer members to easily become acquainted with their older colleagues in the community.

The Board of Councilors is fully aware of the occasional criticisms that have come from some of the members who feel that this refreshment feature is an unnecessary expense; but in this connection, as in all the other Society's activities, we must all remember that there is not a single thing that the Society does, or tries to do, that will meet with the commendation of all the more than seven hundred members; and all that can be done is to have the Association try to do those things which will be of the largest profit and pleasure to the largest possible number of members of the Association, throwing open all privileges to every member of the Association, and then letting those who do not wish to partake of any of these privileges or pleasures, refrain therefrom, if they so desire.

But all such members at all times should remember that in this scientific organization of a body of medical men and women, banded together for the attainment of mutual scientific and professional ends, that here, as in other clubs and semi-social organizations, the best that can be done is to promote those efforts which will go to the development of the organization at large, while at the same time giving to each individual member the largest possible amount of scientific, social, professional and material returns. It may be said further, that if it be permitted the Los Angeles County Medical Association to pass judgment on its own lines of work, then it may truthfully tell itself that its many activities have not only been of a type out of the ordinary, but of a character that has excited the interest of other county units throughout the United States; and that our various lines of work have received also the commendation of many of our visitors who have been with us from time to time.

3. **Branches.** In addition to the older established branches at Pasadena, Pomona, Santa Monica and Long Beach, which all seem to be thriving, it is interesting to know that the Foot-hill Medical Society, which has had its headquarters at Monrovia, has practically completed arrangements to come in as an additional branch. This completes for the time the extent of our geographical branches, of which we will have five, with one section of specialists, namely, the Eye, Ear, Nose and Throat Section. The matter of sections in surgery, obstetrics and pathology has also been under consideration, as already noted.

4. **Mal-Practice Defense.** The efficiency of the State Society mal-practice defense, this year, as in the previous years, has been fully demonstrated, but the attention of members is, however, again drawn to the need of observance of the rules regarding this malpractice defense, as laid down on page 32 of the May, 1915, roster, in its relationship to having X-ray photographs taken in fracture cases, and in not filing suits for fees within one year from the date of last service.

5. **Our Telephone Exchange.** The comments which have appeared from time to time in the "Bulletin" concerning the work of the Telephone Exchange of our Society—which was established on November 20, 1913, practically only two years ago—should by this time have convinced our members of the phenomenal success of this venture.

When this Telephone Exchange was instituted, there were a large number of members who prophesied failure. The fact, however, that private commercial organizations had also seized upon this idea, and had been able to extract the sum of from $15.00 to $25.00 a year from members of the profession for such a service, was in itself a demonstration that such an exchange could be made to be of value to members of the medical profession. It would be absurd to think that members of the medical profession, who are notoriously reluctant to separate themselves from their money in an affair of this kind, would willingly give up $25.00 a year unless some kind of a compensatory return had been in evidence.

The first month's work of our Exchange, in December, 1913, gave a total of only 285 calls handled. Contrast this now with the total number of calls for last month, namely, November, 1915 (the twenty-fourth month of the Exchange's existence), when there was a grand total of 4,976 calls, or an increase of 1646 per cent. in two years, and one can appreciate that this Telephone Exchange of the Los Angeles County Medical Association must have truly met a need and is doing a real service for many of its members, or such a phenomenal and extraordinary increase of the amount of work could not have come into being.

The thanks of the Association are due the operators who have so efficiently striven to carry out the objects of the Exchange.

Suggestions, of course, for the betterment of the Exchange are always cordially welcomed, and it is hoped that if at any time members can suggest changes in modes of operation, etc., for the betterment of the service, that they will not only feel free to do so, but that they will consider it an obligation which they owe to their Society and colleagues to notify the Secretary of such possible improvements.

A summary of the work of the Exchange is appended hereto, showing the total number of calls handled month by month in the twenty-four months of the Exchange's existence; and from this it will be seen that the increase in the amount of work handled has been gradual and steady, and that the figures therefore must be construed as an evidence of the increasing hold which the Exchange is making for itself, both with the members of our profession and with their clients.

Report for the Second Year—Los Angeles County Medical Telephone Exchange.

November 20, 1914, to November 20, 1915.

Month	Total No. Calls	Total Increase	Grand Total through Month
13th month, November 20th to 30th, 1914	874		
14th month, December, 1914	3,027	408	3,901
15th month, January, 1915	3,056	29	6,957
16th month, February, 1915	3,261	205	10,218
17th month, March, 1915	3,532	271	13,750
18th month, April, 1915	3,358		17,108
19th month, May, 1915	4,181	823	21,289
20th month, June, 1915	4,015		25,304

21st month, July, 1915	4,394	379	29,698
22nd month, August, 1915	4,367		34,065
23rd month, September, 1915	4,446	79	38,511
24th month, October, 1915	5,040	594	43,551
25th month, November 1st to 20th, 1915	3,356		46,907

Summary: Grand total of all calls handled for the second year was 46,907.

Summary of calls for the 1st year.....15,276
Summary of calls for the 2nd year.....46,907

Grand total of calls.....62,183

6. **Bulletin.** Our little bulletins, which have gone out every two weeks with the programs of the meetings, have been a means of placing matters of Society and professional interest before the members. News items, and suggestions on topics which might be of interest or value to the members, and which could appear in this Bulletin, are always welcomed.

7. **In Conclusion.** Our Association remains, as has been the case for the last several years, the largest county medical unit in the State of California, and the gradual net increase of membership which is chronicled each year, leads us to believe that this first place as the largest county unit of the Medical Society of the State of California, is not apt to be imperiled in the near future.

Coupled with this distinction of being the largest county medical unit in California, goes the obligation, of course, of being one of the most active and best in every way of all county medical units, not only in the State of California, but of other county medical societies of similar size throughout the United States.

To accomplish this, fellow members of the Association, we assure you is the aim of those of your colleagues whom you have honored from time to time by election to the Board of Councilors; and we can affirm to you that the efforts of those colleagues, acting as your Executive Board, or Council, have at all times been efforts that have kept constantly in mind the interest of all of you, not only as individual members of the profession, but also from the interests of the Society as a whole.

It has not always been easy for the members of the Board of Councilors to drop their personal affairs in order to be at the business meetings of the Council, acting as the administrative board of the Association. but they have done this willingly; and we believe from an observance of their conduct, that in no single instance can any one ever claim that these men have not acted with the broadest possible viewpoint, and always with the highest conception of obligation in the interest of their individual fellows and of the Society as a whole.

We append this notation here, because the work of the Council is so quietly done that there may be some who see in the position of Councilor only an honorary position. It is far more than that, and no member should ever aspire to or assume these obligations unless intending in good faith to live up to them.

For the cooperation of the many individual members of the Association, who in non-official capacities have responded at different times throughout the year, when they have been called upon to do service for the Association, we wish at this time to express our appreciation.

Your Secretary-Treasurer desires also to thank you all for your cooperation and patience.

Respectfully submitted,

GEORGE H. KRESS,
Secretary-Treasurer.

DR. ROSE TALBOTT BULLARD.

After an illness of only one week, Dr. Rose Talbott Bullard of Los Angeles died December 22d from septicemia. Dr. Bullard was born in Birmingham, Iowa, April 16, 1864. She was the daughter of a physician, Joseph Talbott, who like his daughter died suddenly while engaged in the activities of his profession. Dr. Bullard graduated from the Woman's Hospital Medical College of Chicago in 1886, and was the valedictorian of her class. The same year she came to Los Angeles and engaged in the active practice of medicine, which she continued until the time of her death, save for the time spent in studying and taking special courses here and abroad. Dr. Bullard specialized in gynecology and surgery. She was a member of the Los Angeles County Medical Association (being its Secretary five years and its President one year), the Southern California, State Medical, and the American Medical Association. She was also a member of the Alpha Epsilon Iota Fraternity, one year being its national presiding officer. In 1914 she was elected a Fellow of the American College of Surgeons. For several years she was Instructor in Clinical Gynecology in the College of Medicine of the State University at Los Angeles, and for ten years conducted the Department of Gynecology and Surgery in the Southern California Practitioner. She was a member of the Friday Morning Club, and a member of the Board of Managers of the Young Women's Christian Association of Los Angeles; she also belonged to

the First Congregational Church. On May 3, 1888, she married Dr. Frank D. Bullard, with whom she has been associated in practice since that time. They have one daughter, Helen.

Dr. Bullard was fitted by training and temperament for her chosen work. A close observer, endowed with good judgment, she was painstaking and gentle in her work, possessing the confidence of her patients, the respect of the profession, and the love of every one who knew her. Though quiet in word and action, she possessed the courage of her convictions and the initiative to independently carry out her decisions. The medical profession, and more especially the women physicians of California, have met with a genuine loss in the death of Dr. Rose Bullard.

DR. G. I. CASON.

Dr. G. I. Cason, a pioneer practitioner of Colusa County, following an attack of paralysis from which he suffered on January 15th, died on the evening of January 17th at the family home in Sixth street, Colusa. His wife and sister, Mrs. J. F. Ellison, were with him when the end came.

Dr. Cason was one of the best known men in Colusa County, and popular with a wide circle of friends who were shocked and grieved at his sudden death.

Dr. Cason came to California in 1877, and had been a resident of this state, most of the time living in Red Bluff, except for three years when he was practicing in Oregon.

TO TELL RECENT VICTORIES IN WAR ON TROPICAL DISEASES.

The achievements which science is scoring in the great war against the tropical diseases are to be described in a series of public lectures by members of the faculty of the University of California Medical School at 10 o'clock on Saturday mornings beginning Saturday, January 15, at the University of California Hospital, on Second and Parnassus avenues, San Francisco.

Since the white man's opportunity to live and work in the tropics is dependent upon control of the tropical diseases, tropical medicine is regarded by the University as of particular importance to California and to San Francisco, because of the increasing commercial relations between California and tropical countries.

The lectures at ten o'clock every Saturday morning from January 15 to April 22, in the amphitheatre of the University Hospital, will be followed at eleven o'clock by clinical demonstrations, the discussion of clinical histories, and demonstrations of specimens and pictures.

The lectures (from and after March 1) all open to the public, will be as follows:

March 4—Dr. H. F. Nichols, "Spirochaetiases."

March 11—Dr. Billings, "The More Important Helminthiases."

March 18—Dr. K. F. Meyer, "Yellow Fever, Dengue, and Pappataci."

March 25—Dr. K. F. Meyer, "Typhus, Spotted Fever and Verruga Peruviana."

April 1—Dr. Howard Morrow, Clinical Professor of Dermatology, "Leprosy and Tropical Skin Diseases."

April 8—Dr. Billings, "Beriberi and Pellagra," with demonstrations.

April 15—Dr. E. L. Walker, "Parasitic Insects and the Role of Insects in the Transmission of Tropical Diseases."

April 22—Dr. K. F. Meyer, "Tropical Hygiene and Sanitation—Summary of the Present-day Achievements."

SAFETY FIRST.

As a further step to safeguard the life of passengers from accident, Western railroads from the first of February will prohibit the carrying of motion picture films in passenger cars. The celluloid of which the films are made is a highly combustible substance, and the railroads fear that a chance contact with fire might end in disaster.

This action follows that already taken by railroads of the country located in the East and Middle West. A passenger on a suburban train running out of Chicago recently carried into the combination smoking and baggage car four reels of motion picture films and placed it on the floor between the seats. In some way, presumably by a lighted match dropped by a smoker, the films were set off and an explosion occurred in which 38 persons were badly burned, two fatally. As a result railroads are no longer willing to submit their customers to such a hazard.

When films are sent by express, they can be inspected when received for shipment, and carried in the safe manner laid down by the packing rules of the Interstate Commerce Commission.

This ruling has been recommended by the American Railway Association, the Bureau for Safe Transportation of Explosives.

AMERICAN FIRST AID CONFERENCE.

As Secretary of the American First Aid Conference I would appreciate very much if you would publish a short abstract of my article "First Aid to the Injured," which appeared in the January number of Surgery, Gynecology and Obstetrics (page 21). See also "The Military Surgeon," January 16, page 44.

In this article I discuss the methods of survey with suggestions to the Special First Aid Committee of your State Medical Association which, I trust, has been appointed.

At the last meeting of the National Board of First Aid Standardization in Washington, a resolution was passed requesting these committees to make their report to the Secretary of the American First Aid Conference, who will forward such reports to the Board of Standardization. The Board of Standardization recently appointed by the President of the United States is as follows:

Dr. Richard H. Harte, Philadelphia, chairman, representing the American Surgical Association; Assistant Surgeon-General W. C. Rucker, secretary, representing the U. S. Public Health Service; Dr. J. Shelton Horsely, Richmond, Va., representing the American Medical Association (surgical secretary); Dr. Samuel C. Plummer, Chicago, Ill., representing the American Association of Railway Surgeons; Dr. John P. Kaster, Topeka, Kansas, representing the Association of Railway Chief Surgeons; Major Robert U. Patterson, Medical Corps, U. S. A., representing the War Department and the American Red Cross; Surgeon A. M. Fauntleroy, U. S. Naval Medical School, representing the Navy Department; Colonel Louis A. LaGarde, U. S. A., retired, representing the War Department.

I plan from time to time to send your Journal items of interest in regard to the first aid survey, and I hope to stimulate among the profession in your State the writing of some special articles on first aid, which I trust you will publish in your Journal.

I would appreciate a copy of your Journal in which items of interest on first aid are published.

Very sincerely yours,

JOSEPH C. BLOODGOOD,
Secretary A. F. A. C.

THE FEBRUARY MEETING OF THE STATE BOARD OF HEALTH.

The State Board of Health met in Sacramento on February 5th. There were present: Dr. George E. Ebright, President; Dr. F. F. Gundrum, Vice-President; Dr. Robert A. Peers, Dr. Adelaide Brown and Dr. Edward F. Glaser.

Specimens Improperly Packed.

It having been called to the attention of the Board that many specimens sent by physicians to the laboratories are improperly packed and in direct violation of the postal regulations, the Board referred the matter to the Attorney, who will frame a letter to be sent to all physicians in the State, warning them against infringement of the United States postal laws in this matter and calling attention to the great danger of the transfer of infection.

Sewage Disposal Permit Granted to Reedley.

In accordance with the recommendation of the Director of the Bureau of Sanitary Engineering, a permit was granted to the city of Reedley to discharge sewage into the Kings River, provided:

1. That a modern sprinkling filter be constructed as outlined in the report.

2. That at a river stage of three feet or less (flow not less than 10,000 feet) no sewage be permitted to enter the river direct without additional treatment to completely sterilize it.

Sewage Disposal Permit Granted to Riverside.

A permit was granted to the city of Riverside, in accordance with the recommendation of the Director of the Bureau of Sanitary Engineering, to discharge its sewage on to a tract of land approximately five hundred acres in the vicinity of the confluence of the old and new channels of the Santa Ana River.

Sewage Disposal Permits Granted to the Cities of El Centro and Imperial.

In accordance with the recommendation of the Director of the Bureau of Sanitary Engineering, a permit was granted to the cities of El Centro and Imperial to discharge clarified sewage into New River.

Subsidy Granted Los Angeles County.

In accordance with the recommendations of the Director of the Bureau of Tuberculosis, the new thirty-bed pavilion at Los Angeles, having been inspected and found to fulfil the requirements of the Bureau of Tuberculosis of the State Board of Health, was placed on the eligible list to receive the subsidy.

Subsidy Granted San Joaquin County.

In accordance with the recommendations of the Director of the Bureau of Tuberculosis, the San Joaquin County Hospital, having been inspected and found to fulfil the requirements of the Bureau of Tuberculosis of the State Board of Health, was also placed on the eligible list to receive the subsidy.

Hospitals Reaccredited.

In accordance with the recommendation of the Director of the Bureau of Registration of Nurses, the following hospitals, having been inspected and found to be continuing to meet the requirements of this Board, were reaccredited for one year from date, February 5, 1916: University of California Hospital, San Francisco; St. Joseph's Hospital, San Diego; Cottage Hospital, Santa Barbara.

Hospitals Accredited.

In accordance with the recommendations of the Director of the Bureau of Registration of Nurses, the Children's Hospital, Los Angeles, having complied with the special recommendation of the Board of December 8, 1915, arranging for the proper affiliation with another accredited school, and now meeting with the requirements of the Board, was accredited for one year from date, February 5, 1916.

Certificates as Registered Nurse Granted.

In accordance with the recommendation of the Director of the Bureau of Registration of Nurses, the following applicants, having met the requirements of the law under Chapter 319, Section 8, and the rules and regulations of this Board, were granted certificates as registered nurses: Viggo M. Toppenbert, No. 5158; Pearl Hammons, No. 5252.

Report of Rabies Conference.

Dr. F. F. Gundrum, Vice-President, presented a summary of his report on the conference on rabies, held at Salt Lake City, February 1, 1916, as follows:

"The Vice-President left Sacramento for Salt Lake City to attend the Surgeon-General's Conference, at 8 p. m. Tuesday, February 1. The following organizations were represented at the Conference: United States Public Health Service, Forestry Service, Biological Survey, Bureau of Animal Industry, the District of Columbia, Kansas, Montana, Wyoming, Idaho, Utah, Washington, Oregon, Nevada, and California. Each organization had one vote in the conference.

"Doctor Kerr appointed a committee on resolutions consisting of Doctor Woodward, District of Columbia, chairman; Doctor Fricks, United States Public Health Service; Dr. T. B. Beatty, Utah; Doctor Tuttle, Washington, and Dr. F. F. Gundrum, California.

"Rabies was first discussed and it developed that this disease is quite prevalent in California, Washington, Oregon and Kansas. Doctor Fisher, Chief of the Biological Survey, announced that a bill appropriating $75,000 had been passed by both Senate and House as an emergency fund for the Biological Survey in the extermination of coyotes in the west.

"Other matters considered were Rocky Mountain Fever, the question of indigent tuberculous who have migrated from one state to another, and the discussion of the sanitation of railway coaches, Pullman cars in particular."

Foods and Drugs.

The Board then considered violations of the food and drug laws, and held the hearings set for eighty-five alleged violations. The disposition of each case was determined by a vote of the Board.

WILBUR A. SAWYER, M. D.,
Secretary.

NEW MEMBERS.

Wintermute, Chas. E., Saratoga, Cal.
Reamer, E. F., Modesto, Calif.
Purkitt, T. T., Willows.
Crawford, Jas. P., San Quentin.
Newton, Le Roy A., Los Angeles.
Hibben, J. Severy, Pasadena.
Emmons, Calvert L., Ontario, Cal.
Miyata, Yujiro, Los Angeles.
Swearingen, F. C., Los Angeles.
Grubbs, T. Elmer, Los Angeles.

DEATHS.

Atkinson, H. H., Harpoot, Turkey.
Brownlee, Geo. D. Died in Mokelumne Hill, Cal.
Cason, George I., Colusa, Cal.
Sanborn, Franklin H., Fort Bragg.
Biehl, P. T. C., Berkeley.
Steele, Chas. H. (Died in Detroit, Mich.)
Beyer, Herman, Oceano, Calif.
Mansfield, Lois Fitch, Santa Barbara.
Wells, E. W., Eureka, Calif.
Johnson, Wm. M., Redlands, Calif.

RESIGNED.

Watson, H. G., Los Angeles.